THE THEORY AND HISTORY OF BANKING

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WITH SUPPLEMENTARY CHAPTER PRESENTING THE RECORD OF THE FEDERAL RESERVE SYSTEM

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FIFTH EDITION

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PREFACE TO THE FIFTH EDITION

In this edition numerous changes and additions have been made throughout the volume designed to cover recent banking experience and legislation, and the chapters on Central Banks and the Federal Reserve System have been largely rewritten. No attempt has been made to give a full account of banking operations during the World War, because that experience would have little value for the understanding of normal banking activities. Moreover, aside from certain legislative changes to which reference is made in the historical chapters, the War seems to have made, with one exception, no important change in the conditions under which the banking business is conducted. It has, for the time being and perhaps permanently, greatly changed the relative international financial position of the leading commercial countries. This is a matter to which attention is given in several chapters of the volume.

OLIVER M. W. SPRAGUE.

CAMBRIDGE, MASS., August, 1929.

PREFACE TO THE FIRST EDITION

THE preparation of the following chapters is the result of the need of some convenient statement of ordinary banking operations, felt by the writer when lecturing upon banking to a large class of students in the elements of political economy. To the chapters devoted to such operations it was found useful to add a series of historical chapters on certain of the great banks and banking systems, partly for the easy illustration of theory and partly to supply the want of any good manual of banking history.

Eight of the chapters were printed in 1885 for the use of classes in Harvard University, but were not then given to the public. To these have now been added an introductory chapter, a chapter on combined reserves or the system of Clearing House loan certificates, and one on the Bank of Amsterdam. The whole has been revised and the notices of current history brought down to the present date, and the book is now laid before students and readers with the hope that it may aid in the systematic study of a subject, the treatment of which by writers upon economics is generally either too summary or too diffuse for ordinary purposes.

The writer has annotated his text with a freedom which perhaps demands some apology, desiring to make his notes answer the double purpose of informing the reader as to the sources from which statements are drawn, and of inviting him to explore the sources more deeply than was possible within the limits of the present publication.

C. F. Dunbar.

January, 1891.

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THE THEORY AND HISTORY OF BANKING

CHAPTER I

INTRODUCTORY

THE operations of banking, as the system has been developed in the last three centuries, appear at first sight to be singularly complex and difficult of comprehension. This is not due, however, to any mystery in the operations themselves, but is the result of their multiplicity and of the varied conditions under which they take place. The wants which banks satisfy are of a simple kind, sure to arise early in the history of any commercial or industrial community in which there is mutual confidence among men; and the satisfaction of these wants is a business easily established, in what might well be regarded as an almost primitive condition of trade. The transactions by which these wants are satisfied are, moreover, as simple as the wants themselves, and are speedily reduced to such routine as to lead Adam Smith, in a well-known passage, to rate "the banking trade" as one

of the few which, in his judgment, could be brought to such uniformity of method as to be safely conducted by a joint-stock company.

The leading wants to be provided for by banks are, first, loans upon a considerable scale, required by individuals and corporations embarking in enterprises beyond their own means; and, second, the temporary employment of money which is not required by the owner for immediate use, or at least the means of safely keeping it. Some agency for lending and some place of deposit are called for as soon as commerce begins to move in a regular course. In some countries the task of simplifying the currency of the community, and of giving it an ascertained value, was formerly entrusted to banking institutions, but this is a service which can manifestly be more satisfactorily performed by government and has now everywhere become one of its regular functions. Transfers of funds and arrangements for making settlements between persons in different places in the same or in different countries, *i. e.*, domestic and foreign exchange, have always been and will remain an important field of banking activities. The primary and indispensable functions to be provided for, however, are those of lending and of receiving on deposit, and it is these which have given rise to modern banking.

These functions, it is clear, imply no very complex operations. They require prudence, integrity, and patience, but they have no mystery.

The banker who lends, or who engages to supply cash to his customer as it may be called for, needs to be sure of the solvency of his borrower and of the goodness of the security received, and must have the evidence of the transaction made indubitable, its terms clearly fixed, and the record of it complete and exact. When he receives cash on deposit, or collects for others cash which is due and holds it until it is wanted by the owners, he must in like manner be sure that the evidence of every transaction is regular and placed beyond doubt, and that its record is precise and systematic. And when, as an extension of his system of holding deposits, he recognizes the right of a depositor to transfer his deposit or any part of it to another person, in order to make a payment to the latter, the operation of transfer must be closely followed and the resulting changes in the banker's accounts must be made with fidelity and minute accuracy. But in no one of these cases does the actual transaction present any more difficulty of comprehension than the simple payment or receipt of money. The questions of prudence—how much and to whom it is advisable to lend, and upon what terms, how far it is safe to assume that deposits will be left undisturbed, and to what extent it is needful to be prepared for demands by depositors—require all the light that trained sagacity and experience can throw upon them, as do the questions relating to the conduct of business in other departments; but the essence of the

transactions themselves, to which the judgment of the banker is applied, is simple.

As a natural consequence of the simplicity of the operations involved in lending and in receiving deposits, it is probable that they have been undertaken and carried on in every old country by individuals long in advance of any public establishments, and long before the chroniclers of history thought it worth while to notice phenomena of such a humble order. Private lenders established banking in Venice two centuries before the Senate opened its first public bank of deposit in 1587. Banking was in like manner practised by individuals in Amsterdam long before a special class of evils led the city to establish the famous Bank of Amsterdam. And banking of a well-defined modern type was introduced by the London goldsmiths at least a generation before the opening of the Bank of England in 1694. Instances of the same sort could easily be multiplied, tending to show that in other countries also banking has had its origin in the effort of individuals to supply certain rather primitive wants of an advancing community, and that the process of satisfaction was by means of a few thoroughly simple operations. Such as these leading operations were two or three centuries ago, they have continued to be in the midst of the changes and the enormous development of modern times.

Wherever banking has reached an even moderate measure of development, the individual wants

which it undertakes to supply have ceased to be the exclusive object of attention. The general influence and ulterior effects of banking operations, not originally foreseen and long a matter of dispute, have become potent factors in the diffusion of banking and in the determination of the character of the legislation to which it has been subjected. The first bankers probably had little thought of affording encouragement or applying a stimulus to the industry of the community as a whole. When they began, however, to lend their money systematically to merchants or the producers of goods they began to give the command of capital in the enterprises where, for the time being it was most called for and presumably most needed. When they increased their loans of this sort, by means of the funds left temporarily in their care by persons depositing with them, they began to give to industry the benefit of resources which might otherwise have remained idle, or to secure the more speedy application of savings slowly seeking employment. The use of their own notes as the medium for making their loans, in a manner strictly analogous, gave to their borrowers the command of resources which the fluctuating body of noteholders might forbear to demand. Again the practice of discounting the bills received by dealers from their customers tended to a rapid organization of credit, and, by giving the dealer the immediate use of that which was due to him at some time in the future, shortened the period

required for "turning his money" and undertaking some fresh enterprise. It is obvious that the bankers provided no new wealth by their lending and deposit-holding, but it is equally plain that they directed existing resources to the enterprises and industries most in need of support, and that they quickened the succession of commercial and industrial operations. A given amount of capital was thus made more effective, so that the result of the introduction of banking in any community was the equivalent of a considerable increase of capital, although not implying any real increase in the first instance.

The stimulus thus applied by banking to the general commercial and industrial movement of any community, whether young or old, has long been clearly seen; and it is this effect of operations, at first undertaken simply with reference to the demands of individual convenience, that now chiefly claims attention and excites interest. This stimulus is not unattended by risk. Deposit-holding and the issue of notes are alike operations of credit. They imply, as conditions of their existence, a certain growth of mutual confidence in any community, and a certain degree of domestic peace; and under conditions otherwise similar, nations will differ in their resort to such operations, as the national temperament is more or less sanguine and as tradition and habit have prepared the way, or the reverse. But to whatever extent credit is thus used, it introduces not only the dan-

gers of misplaced confidence, but the greater danger coming from the spirit of adventure. The tendency under the keen spur of a developed banking system to carry enterprises based upon credit beyond the point of safety, the infection of an entire community by the fever of speculation, are too familiar for comment, and the errors of bankers in aiding and encouraging that which they should have striven to repress or control, have at times brought the utility of banking itself into question.

The modern world, however, does not discard any great agency merely because its use is attended by danger. To secure a balance of gain by minimizing the risks, always recognizing their existence and their deplorable character, has been the aim of most commercial communities in dealing with banking during at least four generations. The ignorant hostility to the system itself, instead of its abuses, of which traces were formerly to be found in the constitutions of a few of the United States, has generally given way to a wiser appreciation of the services rendered by banks and bankers in the development of the country.

The difficulty of properly weighing these advantages and risks was greatly increased by the reckless imprudence with which banks in many countries, especially during the early stages in the development of the banking business, have managed their issues of notes. Although not a necessary adjunct of the business of lending and of deposit-holding, the issue of notes by all banks

was a natural and, in some conditions of society, a usual adjunct. In such circumstances, the issuing banks or bankers at once become responsible for an important part of the visible circulating medium of the country. Their mistakes or wrongdoing may affect a multitude of persons having no intentional or conscious share in or relation to the concerns of any bank; and may easily throw the affairs of a community into confusion. It is true, as we shall see hereafter, that the steps by which a bank issues its notes do not differ from those by which it assumes other less observed liabilities, and that its obligations in the two cases are the same in essence. Still, the wide diffusion of an issue of notes, the somewhat greater opportunities for mismanagement than of deposit credit, particularly when the number of issuing banks is large, and the more visible and notorious nature of the resulting evils make such issues the object of extreme jealousy, and have often led to the indiscriminate condemnation of all banks. Although, therefore, the issue of notes is not one of what we have called "the primary and indispensable functions" of banking, it is a function which has filled a large space in discussions of banking theory, as well as in the history of the great banking systems and in legislation.

The starting-point in the present exposition of the subject then must be an examination of the transactions involved in lending, deposit-holding, and note issue or circulation.

CHAPTER II

DISCOUNT, DEPOSIT, AND ISSUE

A BANK may be described, in general terms, as an establishment which makes to individuals such advances of money or other means of payment as may be required and safely made, and to which individuals entrust money or other means of payment, when not required by them for use. In other words, the business of a bank is said to be to lend or discount, and to hold deposits. With these two functions may be combined a third, that of issuing bank-notes, or the bank's own promises to pay, for use in general circulation as a substitute for money.

The object of the present chapter is to inquire into the real nature of the operations, thus roughly classified and usually described by the terms Discount, Deposit, and Issue; and for this purpose we shall analyze the transactions attending the ordinary and simple case of a loan made by a bank to one of its customers.

The borrower who procures a loan from a bank does so in order to provide himself with the means, either of making some purchase, or of paying some debt. He seeks, therefore, to obtain, not necessarily money, but a certain amount of purchasing

power in available form, or of whatever may be the usual medium of payment, measured in terms of money. If we suppose him to be a merchant, buying and selling goods upon credit in the regular course of his business, he is likely at any given time to have in his hands a greater or less number of notes, not yet due, signed by the persons to whom he has heretofore made sales; and it may be in the form of a loan, made upon the security of one or more of these notes and giving him immediate command of the amount which will become due upon them in the future, that he will procure what he needs from the bank. This loan may be supposed to take the form of what is termed a discount; in which case, in exchange for the note "discounted" the borrower is entitled to receive from the bank the amount promised in the note, less the interest on that amount computed at an agreed rate for the time which the note has still to run.[1] The discounted note becomes the property of the bank, to which the promisor is henceforward bound to make payment at maturity; and this payment when made obviously restores to the bank the amount advanced by it in exchange

[1] If, *e. g.*, the note discounted promises to pay $2,500, has 87 days to run, and the agreed rate is 6 per cent., then the interest to be deducted is $36.25, and the proceeds received by the borrower are $2,463.75. This process, which is commonly used and is known as "bank discount," gives a result somewhat different from that of discount in the strict sense of the term. Strictly speaking, discount consists in finding that sum which, if put at interest for 87 days at 6 per cent., will then amount to $2,500, or,

for the note, together with the interest which was the inducement for making the exchange.

It is now clear that the operation which we have described, although spoken of as a loan by the bank to a borrower, is in fact something more than a loan. The note when given was evidence that its holder owned the right to receive at a fixed date a certain sum of money, and this right the so-called borrower has ceded to the bank. Passing over for the present all question as to what he has received in exchange, his cession of property by sale is as distinct and complete as if he had sold a bale of cotton to another merchant, instead of selling to a bank his right to receive money in the future. It is true that in parting with the note he probably endorsed it, and thus bound himself to make good its amount in case the promisor should fail to do so; but he might equally bind himself by some warranty given to the purchaser, when selling any other description of property. The note has ceased to be his, and now takes it place among the investments or securities of the bank, although custom may lead to its classification as a "loan or discount."

The operation which we have here presented in its simplest form may easily change its shape

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in other words, in finding the present worth of $2,500 due under the conditions stated. As this present worth is $2,464.27, the established practice gives to the bank a slight profit in addition to that afforded by true discount. See on this point Agricultural Bank *vs*. Bissell, 12 Pick. 585.

according to circumstances. Thus, instead of offering for "discount" the notes of his customers, our merchant may offer his own note for the sum which he wishes to obtain, and attach to it, as security for its payment at maturity, one or more of the notes of his customers. In this case the principal note, his own, becomes the property of the bank, the right to receive from him at its maturity the sum promised in it being the real object of sale; and the attached notes, originally received by him for merchandise and now pledged to the bank as collateral security for the performance of his contract, continue to be his property, subject to the right of the bank to be indemnified therefrom in case of his failure to do so. So, too, he may offer his own note, securing it by the pledge of bonds, stocks, or other valuable property, the ownership of which he does not part with, while at the same time he sells as effectually as in the first case the right to receive from him a certain sum at a fixed date. Finally, the bank may discount the unsecured note of the borrower. These unsecured notes are based on the character of the borrower and the financial position of his business and are generally limited to not more than half of his total working capital requirements as a maximum. Instead of the note of hand which we have supposed to be used, some other kind of negotiable paper, as, for example, the trade acceptance—a bill of exchange, drawn by the seller of goods and accepted by the purchaser—may be preferred by

local usage as the evidence of commercial obligation. Still, whatever the form of the transaction by which a bank may make "advances" or "loans," it will be found that in every case a right to demand and receive a certain sum of money has been acquired by the bank for a consideration.

We now have to consider what it is that the bank gives in exchange for the right to demand and receive money at a future time, acquired by it under these circumstances. To return to our first and simplest case of so-called discount; the proceeds of the discounted note, or its nominal amount less the interest for the time for which it is to run, are in the first instance placed to the credit of the borrower, to be drawn out by him at once or at different times, as convenience or necessity may dictate. In thus crediting him with the proceeds, the bank plainly gives to him simply the right to call upon it at pleasure for that sum of money. Whether this right is exercised at once by demanding and receiving the money, or whether the exercise of it is postponed as regards the whole or a part of the amount, in either case the right to demand, or to "draw," is the equivalent received by the customer in exchange for the right, sold by him to the bank, of which the note discounted was the evidence. The sum which he is thus entitled to call for is said, so long as it stands to his credit, to be deposited in the bank, or to be a deposit standing in his name; so that the transaction is seen to be, both in form

and in substance, an exchange of rights. The same thing is true also in other cases of so-called "loans" or "discounts"; whatever form they take and whatever the collateral security held by the bank may be, the operation is after all essentially an exchange of rights, whereby the bank acquires the right to receive money, or the legal tender of the country, at some future time, and the individual acquires the right to call for money or legal tender at pleasure. The result is to give to him that immediate command of purchasing power or of the usual medium of payment which, as we have said, is the real object sought by him; but at the outset this result is usually secured and the relations of the bank and the "borrower" are settled, by the sale of one right for another, and without the intervention of money or any of its tangible substitutes.[1]

But a deposit may owe its origin to a different operation from that which has just been examined. It happens every day that the merchant, having cash in hand, prefers not to hold it in his possession until it is required for use, but to "deposit" it with the bank where he usually transacts his business, until he needs to use it. In this case, when he makes his deposit, the property in the money or

[1] The less usual case of a loan made in cash does not create a deposit, but is a case of issue if the bank gives its own notes to the borrower. It is, however, the sale of a right for a right in every case except where the loan is made in actual money, when it becomes the sale of a right for coin or currency.

substitutes for money actually handed in by him passes to the bank, and he receives in exchange the right to demand and receive at pleasure, not that which he paid in, but an equivalent amount.[1] Here then, as in the former case, the transaction is in effect a sale, although the use of the word "deposit" seems at first to suggest an entirely different idea of its character. In the case of one important class of banking institutions, savings banks, and the savings departments of commercial banks as well, all the deposits are due to the receipt of money or substitutes for money. Savings banks do not create deposits when they make loans; they simply invest or lend an amount which does not exceed their capital and surplus and the deposits previously acquired. Other banks do more than this. They lend their credit and are able to do so because they provide substitutes for coined money which for most purposes are generally acceptable.

The other leading operations of banks, when analyzed, can also be resolved into cases of the exchange of rights against rights, or of rights

[1] It is true that money may be left as a "special deposit" with a bank, just as plate, jewels, or other valuables may be, in which case, the identical money deposited is to be returned, and the bank consequently does not acquire the property in the thing deposited, but is merely entrusted with its temporary custody. This, however, is not a banking operation, and the deposit in this case is made with the bank, not because it is a bank, but because it owns a strong vault.

against money. As, for example, when the bank, for the convenience of its customer or depositor, undertakes to collect a note due to him by some third party, in which case the amount paid to the bank in money by the promisor is passed to the credit of the promisee as a deposit. Here the bank has received money for the account of the depositor, and has given to him in exchange a right to draw at pleasure for the amount or any part thereof, the property in the money actually paid having passed absolutely to the bank in exchange for the right to draw. And again, when the bank buys from a merchant a bill of exchange, or when it sells a bill of exchange drawn by itself on some correspondent, it effects an exchange of money against a right, or of a right against money, strongly resembling those already considered. And so, too, if in any of these cases any substitute or equivalent for money is used, instead of money itself, the transaction is still an exchange of a right on the one side and some means of payment on the other, the latter becoming the property of the bank.

We have thus far, for the sake of simplicity, spoken only of the "rights to receive" money bought by the bank in one class of cases, and sold by it in another. But where there is a right to receive on the part of a creditor, there is a corresponding duty to pay on the part of the debtor; and these rights or credits, when viewed from the other side, are, therefore, debts or liabilities. The

deposit which is credited in making a loan is accordingly a liability to pay on demand, assumed by the bank in exchange for a security promising a payment to the bank in the future; and the deposit credited upon the receipt of cash from the depositor is a similar liability, assumed in exchange for so much money or so much of its substitutes. In short, as any addition to the loans of a bank is an increase of its investments or resources, so any addition to its deposits is an increase of its debts or liabilities.

A little consideration of the manner in which notes are issued by banks will show that in the bank-note we have only another form of liability, differing in appearance, but not in substance, from the liability for deposits. The bank-note is the duly certified promise of the bank to pay on demand, adapted for circulation as a convenient substitute for the money which it promises. It is issued by the bank and can be issued only to such persons as are willing to receive the engagement of the bank in this form instead of receiving money or instead of being credited with a deposit. Thus the borrower, who in the first instance has been credited with a deposit and to whom the bank is therefore to this extent liable, may prefer to draw the amount in notes of the bank and to use them in making his payments. But, in this case, it is plain that the liability of the bank is changed only in form; it is still a liability to pay a certain sum of money on demand. And so if the depositor

pays in money and receives notes,[1] or receives notes in satisfaction of a demand of any kind against the bank, he, in fact, foregoes the use of the money itself and consents to receive in its stead a promise to pay upon demand, and to receive the evidence of that promise in the form of notes. The question, in which form he shall hold his right of demand against the bank, is one to be decided by the nature of his business or by his present convenience, but plainly the decision of this question in no way alters the relation between himself or any transferee of his right, on the one hand, and the bank on the other. The notes issued by a bank are thus a liability distinguishable in form only from its liability for deposits, and the functions of deposit and issue, spoken of at the opening of this chapter, instead of being distinct, as is often assumed, are one in substance.

In the operations which have now been considered the subject-matter involved is in every case either money or contracts for the payment thereof. No form of dealing in merchandise or real property comes properly within the province of banking. And, inasmuch as a contract for the payment of money may be viewed either as a credit or as a debt, according as it is looked at from the one side or the other, banking is sometimes described as the business of dealing in credits and sometimes as

[1] In early English banking this was a common practice and no doubt explains the phrase "take up money on their notes," used in legislation. See Bagehot, *Lombard Street*, p. 98.

that of dealing in debts. For the transaction of this business in the modern world both of the functions "discount" and "deposit" are indispensable.

In order to be a bank, at the present day, an establishment must carry on the purchase of rights to demand money in the future, and unless it is a savings bank it must also lend its credit, using in some form or other its own engagements for the payment of money upon demand.[1] If it practises the former only, it is simply an investor of its own money, as any private individual may be; if it practises the latter only, it may indeed be said to be a bank of the obsolete type of the Bank of Amsterdam, but it then plainly ceases to answer one of the chief purposes of a modern bank, viz., that of enabling individuals to convert into immediate purchasing power such debts as may be due to them in the future. The use of the third function, however, that of issuing notes, is not indispensable to the existence of a bank. There are occasions for which the liability of the bank

[1] See in Bagehot's *Lombard Street*, p. 212, a remark that the Rothschilds are great capitalists, but are not bankers. The definition of a bank by the internal-revenue act of the United States of 1866 includes "every person, firm, or company having a place of business where credits are opened by the deposit or collection of money or currency, subject to be paid or remitted upon draft, check, or order, or where money is advanced or loaned on stocks, bonds, bullion, bills of exchange, or promissory notes, or where stocks, bonds, bullion, bills of exchange, or promissory notes are received for discount or sale."—14 *Statutes at Large*, p. 115.

in the form of notes or other currency that passes readily from hand to hand is desired, and there are also conditions under which the liability in the form of deposits better serves the convenience of individuals or of the community. Most banks are able to carry on their business successfully without making any issue of notes whatever, and indeed in all but a very few countries the issue of notes has come to be confined to a single institution.

In addition to these essential banking operations involving sales of rights to present payment for rights to future payment, many banks engage in one important transaction which involves no immediate right of payment. They accept bills of exchange drawn upon them by their customers. Such bills of exchange, known as bank acceptances, can be more readily discounted than trade bills accepted by the merchant's own customers. The bank acceptance is an indispensable instrument in foreign trade, where, owing to the distance between buyer and seller, differences in legal arrangements and the constant fluctuations in foreign exchange rates, it is particularly necessary that certainty of payment shall be free from all doubt, and that the obligation shall be readily salable to dealers in foreign exchange. Until recently banks in the United States were not permitted to accept bills of exchange drawn upon them. This entirely proper power was granted to the national banks by the Federal Reserve Act of 1913, and legisla-

tion to the same effect has also been passed in most of the States.

It must be added that incorporation by law is not a necessary condition of the existence of a bank. Discount and deposit, and if no legal prohibition exists, issue also, may be carried on by individuals and firms as well as by incorporated companies. It is true that in discussions of banking it is usual to give almost exclusive attention to incorporated banks, partly because they are usually more important and conspicuous, and partly because their affairs are in some degree open to official inspection, so that the nature of their business is not easily concealed, whereas the transactions of private banks are usually known only to the persons concerned. Investment banking is still largely in the hands of private banking firms, but in all countries commercial banking is tending to be conducted almost exclusively under the corporate form of organization.

CHAPTER III

BANKING OPERATIONS AND ACCOUNTS

Having thus taken a general view of the nature of banking operations, it is now necessary that we should enter upon the consideration of some of their details.

For a bank, as well as for any other business, it is requisite that a capital should be provided at the outset. There can be no constant proportion between the amount of this capital and the extent of the business which may be built up by its means. The larger the business that can be carried on with safety with a given capital, the larger will be the field from which profits can be earned, and the higher the proportion which the profits will bear to the original investment; but the point at which the extension of the business passes the line of safety, varies with the circumstances of the particular bank, the kind of business carried on by those dealing with it, and the condition of the community in which it is established. The attempt has sometimes been made to limit by law for incorporated banks the proportion of trans-

actions for a given amount of capital.[1] Legislation in a few of the Western States limits the acceptance of deposits to ten times the paid-in capital or capital and surplus. It is plausibly argued that such provisions have no foundation except a conjectured average, too rough to be of service in any individual case, and that the judgment of the persons most interested, acting under the law of self-preservation, is far more trustworthy than any legislative decision. But in the United States, where banking is conducted by thousands of local banks many of which are very small and managed by men of limited business experience, these considerations lose much of their force. The capital and surplus of a bank provide a margin of safety against loss to those whose funds have been entrusted to it. Those who manage or control the undertaking should have some thing at stake, and this stake may very properly be enlarged with the growth of the enterprise.

The capital to be provided at the outset is, of course, in the case of a private bank, the contribution of the partners, as in any other undertaking. In the case of an incorporated bank the capital is divided by law into equal shares or units of fixed amount; as *e. g.*, under the law of the United States, a capital of $100,000 is divided into shares of $100 each or some other definite sum; and these

[1] *E. g.*, the law in Massachusetts formerly limited loans to double the amount of the capital. See *General Statutes of 1860*, c. 57, ¶25.

shares are contributed by the individual shareholders, in such proportion as they please. The law may as a matter of public policy limit the proportion of capital stock to be owned by any one individual or firm, and it may also limit the liability of shareholders for debts due by the bank, in case of its failure; but in general, in the absence of special provisions to the contrary, the powers, rights, and liabilities of every shareholder are now usually determined by the number of shares of the stock contributed or owned by him. In the election of directors and of other officers, for the immediate management of the business, every share entitles its owner to cast one vote; the dividend of profit is allotted in the ratio of shares owned, and contributions to meet losses, if required by law, are called for in the same ratio.

The capital subscribed by the intending shareholders must necessarily be paid in in money or in the legal tender of the country. It is not necessary that the whole should be paid in at the outset. In the case of incorporated banks, in the United States, statutes require that some definite proportion, as *e. g.*, one half, shall be paid in before the opening of busines, and the payment of the remainder within six months thereafter, in order to insure good faith and a solid basis for the business undertaken.[1] In many other countries banks are

[1] The English joint-stock banks present some remarkable cases of partially paid capital. Thus Lloyds Bank has a subscribed capital of £75,300,000 of which £15,800,000 has been paid in.

not subject to this requirement and a part of the subscribed capital may remain for indefinite periods as a liability of the shareholders.

If, now, we undertake to represent by a brief statement of account the condition of a bank having a capital of $100,000 paid in, in specie, on the morning when it opens its doors for business, we shall have the following:

Resources		*Liabilities*	
Specie . . .	$100,000	Capital . . .	$100,000

It may at first sight appear to be a contradiction in terms, that the capital should be set down as a liability and not as a resource. But we must here distinguish between the financial liability for what has been received from the shareholders and the right of property in the thing received. The bank has become accountable to its shareholders for the amounts paid in by them respectively, but the money actually paid in has become the property of the bank; or, in the language of accountants, the bank has become *liable* for its capital, and the money in hand is for the present its *resource* for meeting this liability, or for explaining the disposition made of what has been received.

The business having been fully established by means of a part only of the nominal capital, the liability of the shareholders to contribute the remainder in case of need constitutes a species of guaranty fund of great amount. The value of this guaranty is sustained by the practice among English banks of requiring the approval of the board of directors before shares can be transferred.

As the bank requires banking-rooms and a certain supply of furniture and fixtures for the convenient transaction of its business, we may suppose it to expend $5,000 of its cash in providing this equipment. The property thus procured, with the remaining $95,000 in cash, will then be the aggregate resources by means of which the capital is to be accounted for, and the account will stand as follows:

Resources		*Liabilities*	
Real estate, furniture fixtures, etc.	$5,000	Capital . . .	$100,000
Specie . . .	95,000		
	$100,000		$100,000

The bank, however, cannot answer the purposes of its existence, or earn a profit for its shareholders, until its idle cash is converted into some kind of interest-bearing security. Nor is it enough that a permanent investment of the ordinary kind should be made, as by the simple exchange of the cash for government bonds or railway securities. It is the chief business of the bank to afford to purchasers and dealers the means of using, by anticipation, funds which are receivable by them in the future, and this implies both the purchase of private securities or "business paper" to a considerable extent, and also frequent change and renewal of purchases. Moreover, while the private capitalist finds it advantageous to make simple investments of a permanent sort, this would plainly be

insufficient for the shareholders of a bank, who have to pay from its profits some serious expenses of management, and need, therefore, a larger field for earnings than the ordinary returns on their capital alone. Funds derived from other sources provide the means for the bulk of the operations of all banks. Deposits must be secured, and these will be found to be of two fairly distinct though not altogether unrelated types—time or savings deposits, and demand deposits. Time or savings deposits represent funds that are placed with banks primarily on account of the interest paid on such deposits. These funds the depositors might have invested directly, but for various reasons they elect to leave that responsible task to the banker. Demand deposits are essentially different in character: they represent the available purchasing power of virtually all individuals and organizations in the community that in the ordinary course of affairs are in receipt of anything more than very small incomes and that have frequent payments to make. It is some share of these balances that the new bank whose accounts we are constructing must acquire and retain if it is to be a commercial bank, although in accord with modern practice it will presumably also seek to secure savings deposits, opening a savings department for that purpose. It is significant of the trend toward the integration of diverse financial functions that the organization, common in the nineteenth century, of banks designed exclusively to

handle savings deposits seems no longer to be deemed either necessary or even practicable.

In addition to the funds received from shareholders in payment for their shares, a new bank at the time of opening may be expected to acquire balances from many of these same shareholders as well as from others in the community, influenced by such factors as convenience of location or confidence in the owners and officers of the new institution. Let us suppose that at the outset demand deposits, which will of course be drawn mainly from other banks, are received amounting to $50,000, and savings deposits coming more largely from cash physically held by the public, to the amount of $5,000. The statement of the bank will then stand as follows:

Resources		*Liabilities*	
Real estate, furniture, fixtures, etc.	$5,000	Capital . . .	$100,000
Specie . . .	150,000	Demand deposits	50,000
		Time deposits .	5,000
	$155,000		$155,000

At this point it is important to note two important differences between demand, and savings or time deposits. Obligations to the public in the case of savings banks or of the savings departments of commercial banks are due entirely to the receipt of deposists aside from such interest as may be credited to the various accounts. Demand deposits are also built up by the receipt of deposits, but they are also enlarged directly and

immediately by such loans as the bank may make to its own circle of depositors. Another important difference between demand and savings deposits is found in their relative permanence. Money is commonly placed in a savings account for average periods of considerable length. Demand deposits, whatever their origin, are being constantly used, occasioning constant and indeterminate fluctuations in the aggregate deposits of each particular bank. Security of the principal and yield are therefore the essential considerations in the selection of investments of savings. Commercial banks must in addition endeavor to keep themselves in a highly liquid condition at all times.

Most of the conditions of the case are well met by the discount of commercial loans as above described. The time for which such obligations have to run varies with the customs of the trade which gives rise to them, but is in most cases short enough to imply early repayment to the bank. And even where custom gives the paper longer time, if the paper itself is used only as a collateral security, the note which is the actual object of negotiation with the bank is by preference usually made not to exceed six months. It might seem easy then to arrange the purchases of paper with reference to the times of maturity, so as to provide for a steady succession of payments to the bank, and thus facilitate the reduction of the business, if necessary, or its direction

into new channels, as prudence or good policy may require. The certainty of prompt payment at maturity, needed for this end, is presented in a high degree by the paper created in the ordinary course of business. Independently of the collateral security which the bank may hold, the written promise of a merchant or manufacturer to pay on a fixed day is an engagement which involves the credit of the promisor so far that failure is an act both of legal insolvency and of commercial dishonor. Selected with judgment, then, such paper is not only the investment which most completely answers the purposes of the bank's existence, but is probably as safe as any investment which could be found.[1]

It may easily happen, however, that the bank may find it desirable to invest a part of its resources in some other form, either because good commercial loans cannot be procured in sufficient amount, or as a matter of policy. In this case it will purchase such other securities as offer not only safety of investment, but the possibility of easy conversion into cash in case of need. In this country United States bonds, and many descriptions of State, municipal, and corporation bonds might answer this purpose. Stocks would more rarely answer it, being more liable to the fluctuations in price caused by misfortune or the ordinary vicissitudes of business. Mortgages of

[1] The liquidness of the various kinds of bank loans and other assets is further considered on p. 82 below.

real estate, would not be satisfactory, except when held as a security, collateral to some other which is more easily convertible, for even when the mortgaged property is as ample and stable as to insure the goodness of the mortgage, the conversion of the mortgage into cash by sale is not always easy, and is especially difficult at those times when the bank most needs to have all its resources at command. Indeed, the danger to be apprehended from the locking up of resources, in assets which may be solid but are not easily realized, is so great, that it has been said to be the first duty of the banker to learn to distinguish between a note and a mortgage, his business lying with the former. As an investment for savings banks and for the deposits in the savings departments of commercial banks, however, well-selected mortgages are entirely suitable, and accordingly in 1913 the national banking law was modified to permit the national banks to invest a portion of their time deposits in this way. Real estate, of course, cannot be regarded as a banking security, however desirable it may be as an investment for individuals, for it is not only subject to great fluctuations in value, but is at times unsalable; and the law of the United States therefore wisely prohibits investments in it by the national banks, except so far as is necessary for the accommodation of their business.

The results of the process of investment in commercial paper and in other securities are best

understood when we trace the effect in the account of the bank. Taking then the account as it stood on page 26, let us suppose that the bank buys paper or securities from those dealing with it, or, in the common phrase, makes "loans to its customers," to the amount of $90,000, the paper being in many pieces and having various lengths of time to run, but averaging about three months. Supposing the interest to be computed at six per cent., we should have the account changed by the operation as follows:

Resources		*Liabilities*	
Loans	$90,000	Capital . . .	$100,000
Real estate, furniture,		Undivided profits	1,350
Fixtures, etc. .	5,000	Demand deposits	138,650
Specie . . .	150,000	Time deposits . .	5,000
	$245,000		$245,000

Here we have the securities which certify the right of the bank to demand and receive $90,000 at a future date placed among the resources; the net proceeds of the securities, or the aggregate of the sums which the bank holds itself liable to pay for them on demand, stand among the liabilities as deposits, indistinguishable from the funds received directly from the public; and the interest deducted in advance, or the profit on the operation, which the bank must at the proper time account for to the stockholders, also stands as a liability.[1] This, however, is the condition of the

[1] As this profit is not realized until the discounted paper is finally paid, the interest deducted in advance may be carried to a

account at the moment of making the investment' when the bank has made its purchase of securities by merely creating a liability. As this liability is real and must be met, so far as the depositors at any time see fit to press it, let us suppose that depositors call for cash to the amount of $15,000 and we shall have a further change in the account as follows:

Resources		*Liabilities*	
Loans . . .	$90,000	Capital . . .	$100,000
Real estate, etc.	5,000	Undivided profits	1,350
Specie . . .	135,000	Demand deposits	123,650
		Time deposits .	5,000
	$230,000		$230,000

It is clear that, unless the enforcement of the liability for deposits and consequent withdrawal of specie goes much farther than this, the bank can safely increase its loans or its purchase of securities, although its method of doing so is by the increase of its liabilities. We will suppose it, therefore, to have expanded its affairs until it has reached something like the average condition of many of those banks in the United States, which, being incorporated under the laws of the several States, are not authorized to issue notes. It will then stand thus:

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separate account for the time being, to be transferred later to the undivided profits. This method is not universal, however, and in the present discussion the simpler statement appears to be sufficient.

Resources		*Liabilities*	
Loans . . .	$957,000	Capital . . .	$100,000
Bonds and stocks	185,000	Surplus . . .	73,000
Real estate .	30,000	Undivided profits	27,000
Other assets .	40,000	Demand deposits	830,000
Expenses . .	8,000	Time deposits .	370,000
Cash items . / Specie . . . / Legal-tender notes	180,000		
	$1,400,000		$1,400,000

Postponing for the present the consideration of some terms which here occur for the first time, it appears from the above account that loans and other investments have been made to more than ten times the amount of the capital, and that this has been effected chiefly by the creation of liabilities in the form of deposits. What determines the limit to which this process can be carried?

If depositors seldom demanded the payment to which they are entitled, and were contented with the mere transfer of their rights among themselves as a conventional currency, the bank might dispense with holding any large amount of specie or cash in any form and keep most of its resources employed in its productive securities. The expansion of the deposits would then resemble in its effects the expansion of any other currency and might go on until a check should be interposed by the consequent rise of prices and demand for money for use outside the banks in the pockets of the people or for exportation. And it is true, as

we shall see, that in communities where banking is largely practised, the use of deposits as currency by transfer between depositors is so extensive, that a bank in good credit can rely upon deposits being withdrawn so slowly, or rather to so small an extent, as to make it unnecessary to have cash in readiness for the payment of more than a small proportion at any given moment. But in a period of financial disorder or alarm, withdrawals may be made earlier or more frequently, and a larger provision of cash may be needed for safety, than at other times; the kind of business carried on by depositors may expose one bank, or the banks in one place, to heavier occasional or seasonal demands, or may on the other hand make demands steadier, than is the case elsewhere; and a city bank may be more subject to heavy calls from depositors than a country bank. In general, then, for every bank, in its place and under the circumstances of the time, there is some line below which its provision of cash including balances with other banks cannot safely fall. This provision of cash, which in the account last given includes the cash items, specie, and legal-tender notes, is called the reserve, and the necessity of maintaining a certain minimum reserve fixes a limit to the ability of the bank to increase its earning assets. For obviously any increase of assets, that is, of loans or investments, must ordinarily be effected, either by an increase of deposits or by an actual expenditure of cash. In the one case the proportion of

reserve to demand liabilities would be weakened by the increase of liabilities; in the other it would be weakened by the decrease of cash. If, then, the reserve were already as low as prudence would allow, or were threatened by approaching heavy demands from depositors, no increase of securities could be made without serious risk.

What proportion the reserve should bear to the liabilities which it is to protect is a question which the law has sometimes attempted to settle, by requiring a certain minimum, leaving it to every individual bank to determine for itself how much may be required in addition to this minimum. And this is no doubt as far as any general rule can go. As has already been suggested, the requirements for safety of different banks and in different places must vary, and so must the requirements of the same bank at different times. In fact, the question as to the proper amount of reserve never depends simply on the absolute ratio of the reserve to the liabilities, but always involves further questions as to the probable receipts of cash by the bank and probable demands upon it, in the near future. It can only be said that the reserve should be large enough, not only to insure the immediate payment of any probable demand from depositors, but also to secure the bank from being brought down to the "danger line" by any such demand.

It is to be observed that the necessity of providing a cash reserve is not met by the excellence

of the securities held by the bank. Although their certainty of payment at maturity be absolute, still the demands upon the bank are demands for cash, and cannot be answered by the offer of even the best securities. If the depositor or creditor does not receive cash in full for his demand when it is made, the bank has failed, and any satisfaction of his claim by the delivery of a security is, as it were, only the beginning of a division of the property of the bank among its creditors. Specie, therefore, or the paper which is a substitute for it as a legal tender for debt, forms the real banking reserve.[1] The reserve of the bank may, however, be greatly strengthened by the judicious selection of securities. For example, if, in the account above given, the "bonds and stocks" are, as they should be, of descriptions which are readily salable, they afford in ordinary times the means of replenishing the reserve in case of need, without foregoing the enjoyment of an income from this amount of resources for the present. Assets of unquestioned merit may also be used as a basis for loans from other banks.

A flexible method of securing the proper apportionment of resources between securities and reserve, under ordinary circumstances, is by increasing or diminishing the loans, or, in other words, the purchases of securities made from day to day in the regular course of business. That

[1] Bank reserves are further considered in Chapters VI and XII.

part of the securities which consists of the promises of individuals or firms to pay to the bank at fixed dates, is made up of many such pieces of commercial paper, maturing, if properly marshalled, in tolerably steady succession. The payment of one of these engagements when it becomes due may be made either in money, or by the surrender to the bank of an equal amount of its own liabilities, as will be shown in the next chapter. In the former case, the payment of the maturing paper to the bank is in fact the conversion of a security into cash, and increases the reserve without change in the liabilities; in the latter, the reduction of securities is balanced by a reduction of liabilities which raises the proportion of reserve. If, then, the bank stops its "discounts" or its investments in new securities, or if it even slackens its usual activity in making such investments, the regular succession of maturing paper will gradually strengthen its reserve; if it increases its activity in investment, it will lower or weaken its reserve; and if it adjusts the amount of its new investments to the regular stream of payments made by its debtors, it may keep the strength of its reserve unaltered, until some change in the condition of affairs brings cash to it or takes cash away by some other process.

This natural dependence of the reserve upon the more or less rapid reinvestment of its resources by the bank is distinctly recognized by the law of the United States, which provides that when the

reserve of any national bank falls below the legal minimum, such bank "shall not increase its liabilities by making any new loans or discounts" until its reserve has been restored to its required proportion. By a less harsh application of the same principle, the Bank of England operates upon its reserve by lowering or raising its rate of discount, and thus encouraging or discouraging applications for loans. And it was with a view of facilitating the replenishment of the reserve by the curtailment of loans, that the law of Louisiana formerly provided that the banks in New Orleans should hold what were called "short bills," or paper maturing within ninety days, to the amount of two thirds of their cash liabilities, so that the constant stream of payments of such paper might always insure to every bank the early command of a large part of its resources.

The reduction in liabilities and increase in cash through the payment of maturing loans will not be secured unless the bank refrains from making new loans to an equivalent extent, and this course of action is frequently beset with serious obstacles. If a bank is to continue as a going concern engaged in a profitable business, it cannot entirely discontinue its lending operations. It holds its business depositors largely through its readiness at all times to furnish them a reasonable amount of accommodation. Moreover, in times of acute financial strain general loan contraction has invariably been found to be impossible. These are

matters which will receive more detailed consideration in subsequent chapters.

To return, in conclusion, to the account given on p. 34; we have there among the liabilities certain sums classified as "surplus" and as "undivided profits." The surplus is commonly derived from profits which as a matter of policy it has been determined not to divide and pay over to the stockholders, but to retain in the business, as in fact, although not in name, an addition to the capital. In some instances however a part of the surplus represents the excess above par of the issue price of shares either at the time of organization or of a subsequent increase of capital. Undivided profits, is the fund from which, after payment of current expenses and of any losses which may occur, the next dividend to the stockholders will be made, and from which transfers may be made from time to time to surplus account. The current expenses are for the present entered on the other side of the account, as they represent a certain amount of cash which has disappeared; but at the periodical settlement of accounts they must be deducted from the undivided profits and will thus drop out from the statement. "Other assets," here set down as an investment, may be supposed to cover any form of property held by the bank and not otherwise classified, but especially the doubtful securities, or such property, not properly dealt in by a bank, as it may have been necessary to take and to hold temporarily, for the purpose of securing some debt

not otherwise recoverable. For example, although the bank could not properly invest in a dwelling house it might be wise for it to accept it in settlement with an embarrassed debtor, and in this case the property would stand among the "other assets." And, finally, "cash items" include such demands on other banks as are collectible in cash and can therefore fairly be deemed the equivalent of cash in hand. In the absence of any legal provision limiting the classification of such demands as reserve, they may be regarded as virtually a part of the reserve, which in the case before us may therefore be treated as made up of cash items, specie, and legal-tender notes.

To illustrate what has been said in this chapter we will now suppose the bank, with its affairs standing as on page 34, to make the following operations:

a. To add to its securities $20,000, by discount of three-months paper at six per cent. three fourths being provided for by increasing liabilities, and one fourth by the expenditure of cash and to receive additional time deposit of $3,000. The account would then stand as follows:

Resources		*Liabilities*	
Loans . . .	$977,000	Capital . . .	$100,000
Bonds and stocks	185,000	Surplus . . .	73,000
Real estate .	30,000	Undivided profits	27,300
Other assets .	40,000	Demand deposits	844,775
Expenses . .	8,000	Time deposits .	373,000
Reserve. . .	178,075		
	$1,418,075		$1,418,075

b. To retrace its steps, by diminishing its "discounts" or holding of securities to the extent of $50,000, of which four fifths are paid to it by the surrender of demands for deposits to a like amount and one fifth in cash; to pay $1,250 for current expenses; and further to increase its reserve by the sale of bonds and stocks to the amount of $10,000. The following would then be the state of the account:

Resources		*Liabilities*	
Loans . . .	$937,000	Capital . . .	$100,000
Bonds and stocks	175,000	Surplus . . .	73,000
Real estate .	30,000	Undivided profits	27,300
Other assets .	40,000	Demand deposits	804,775
Expenses . .	9,250	Time deposits .	373,000
Reserve. . .	186,825		
	$1,378,075		$1,378,075

c. To sell $2,000 of its other assets for cash with a loss of $500; to make a semi-annual dividend of four per cent., of which one half is credited to stockholders who happen to be depositors also, and one half is paid in cash; to sell $4,000 of bonds at a profit of fifteen per cent.; and to carry $1,000 of its undivided profits to surplus. The account would then stand at the beginning of the new half-year as follows:

Resources		*Liabilities*	
Loans . . .	$937,000	Capital . . .	$100,000
Bonds and stocks	171,000	Surplus . . .	74,000
Real estate .	30,000	Undivided profits	13,150
Other assets .	38,000	Demand deposits	806,775
Reserve. . .	190,925	Time deposits .	373,000
	$1,366,925		$1,366,925

NOTE

It will be observed that in the present chapter the term "reserve" is used strictly as denoting the provision of cash which a bank keeps at command to meet its demand liabilities,—these being its liability for deposits in the case now under consideration, and for notes in cases to be taken up later. Balances with other banks, in particular those with central banking institutions, are also commonly regarded as a part of the reserve of a bank. It is in this sense that the term is now generally used in the discussion of banking questions in this country and in England and in the national bank legislation of the United States. The term is used, however, with a different application on the Continent of Europe, and occasionally even in English-speaking countries. In the French and German legislation it is used constantly in the sense of "surplus," as in the acts concerning the Bank of France and the Reichsbank, and so also in those concerning Italian and Austrian banks. It is also occasionally used, as in the phrase "reserve capital," to denote the unpaid capital which shareholders in many English joint-stock banks are bound to contribute in case of need, as explained at the beginning of this chapter. In the present discussion the term is used solely in the restricted sense noted above.

CHAPTER IV

THE CHECK SYSTEM

In the preceding chapter reference has been made more than once to the transfer of deposits by one holder to another, and to their consequent use as currency. It is now necessary to examine more closely the simple machinery by which this transfer is effected. The depositor, or the creditor of a bank, who has to make a payment to some other person, has his choice between two methods of making it. He may demand money from the bank, in the exercise of his right as a creditor, and deliver this money; or, with the assent of the person to whom he has to make payment, he may give to this person an order on the bank for the money, or what is commonly called a check. If he adopts the latter method, a payment for goods or of a debt is effected by the simple transfer of a right to demand money from the bank; and so too if the recipient of the check gives it in payment to some third person, and he to a fourth, and so on. To this extent the check is plainly made a substitute for the sum of money for which it calls. It represents no particular money or group of coins, for, as we have seen, the deposit is likely to have

been created by the bank in exchange for some security bought by it, and is, therefore, a naked right to demand, and not a claim to any particular cash; and even if the deposit originated in the lodging of money by the depositor, it has in this case also become a naked right to demand and does not imply any claim to the money actually deposited. But the transfer of this naked right, in the case supposed, is made by the agreement of the parties to serve the same purpose as the transfer of money, and the right thus becomes a substitute for money.

The effectiveness of this substitution, however, is increased and the use of the deposit greatly prolonged, where it is the practice for the transferee himself to deposit the check, instead of demanding its payment by the bank, or seeking his opportunity to use it in some payment of his own.

If we suppose all the parties concerned to keep their accounts with a single bank, and suppose a check for $2,000 to have been drawn by A against his deposit in the bank and given by him to B in payment for goods, B may deposit this check to his own credit as he would money. The bank then makes the necessary changes in its accounts, cancels its liability for $2,000 to A and recognizes a liability for a like amount to B, and thus the transfer of the right by A to B is made complete. This novation, or change of creditors, to which the bank has made itself a party, has not only secured

B against the possibility of finding A's deposit in the bank exhausted by other checks drawn by A fraudulently or by mistake, but it has also made B's right of demand against the bank divisible at pleasure, since this, instead of a right to demand a determinate sum, has now become a right to draw his own check or checks to an amount not exceeding $2,000 in all. In this way checks become the instruments by which rights to demand money may be transferred from one individual to another, in such amounts as the transactions between them may require; and when we consider the great security and convenience of transfer by such means as compared with actual payment in money, there is little need of further explanation of the astonishing extent to which checks are now used, especially in English-speaking communities.

If, now, we suppose the parties concerned to keep their accounts with different banks in the same city, we shall have results somewhat more complex but not different in kind. In this case we may suppose the check drawn by A upon Bank No. 1 to be deposited by B in Bank No. 2. If the transaction stands alone, the latter bank collects the money called for by the check, and holds itself liable to make payment to B on demand in sums to suit his pleasure. This makes a change not only of creditors, but of debtors, and yet at the close, after the payment by A to B has been completed, we have in existence a bank liability of the

same amount as that with which we started. But, in a community where there are several banks, the transaction would not stand alone. At the end of a day's business every bank would be likely to have received in deposit checks upon several, and perhaps all, of the others; each would then have checks to meet as well as checks to collect; and each would naturally make its settlement with every other, not by making mutual demands and mutual payments, but by the offsetting of demands and the payment only of such balance as might then remain due from one or the other. Thus, if at the end of the day Bank No. 1 had received in deposit checks upon Bank No. 2 to the amount of $25,000, and Bank No. 2, in like manner, checks upon Bank No. 1 amounting to $23,000, the account as between the banks would be settled easily by the payment of $2,000 by Bank No. 2 to Bank No. 1. And the result is the same if the operation here traced is multiplied by the number of banks carrying on business with each other in a great city. The settlement of accounts by the banks with each other, however, still leaves the banks collectively under the same liability for payment on demand as before. The liability rests upon the banks, it may be, in different proportions, and is differently distributed among the creditors: but so long as payments are made by checks and checks deposited, the right to demand from a bank which is called a deposit continues to exist in somebody's possession, and is

as well fitted to discharge the office of money as when it was first created.

This medium of payment acquires great perfection wherever the Clearing House system is adopted. Under this system there is a daily meeting of clerks representing all the banks carrying on business at any common center. Every bank there turns in at a central office all the checks and cash demands which it holds against others and is credited therewith, and is also charged with all checks and demands brought against it in like manner by others. The checks and demands which have thus been credited to and charged against each bank are then summed up, and the balance found to be owed by or due to each bank, as the case may be, it then pays to or receives from the central office in money. By this means a great mass of transactions, which would otherwise require a series of demands by each bank upon every other in the same place, are settled at once, and the transportation of large sums in cash from one bank to another is to a great extent dispensed with. The use of money in meeting clearing balances becomes unnecessary, thus introducing a further economy, where the various members of a Clearing House all maintain accounts with a common depository, by transfers on the books of which settlements are completed. This has long been the practice in London where the banks maintain large balances at the Bank of England, and in the United States it has

been generally adopted since the establishment of the Federal Reserve system in 1914 in those cities in which there are reserve banks or reserve bank branches.

Where, as in England, banking is conducted by institutions with head offices in large cities operating numerous branches throughout the country, all checks can be handled without difficulty through Clearing Houses. Checks on other banks deposited at a branch are forwarded to the head office or to branches in the more important cities and are then cleared in the customary way. Aside from the mailing expense and the necessary entries on the books of the various branches the procedure is similar in all respects to that followed when a check is received drawn on a bank in the same place.

In the United States, where banking is conducted by thousands of local banks, the collection of checks drawn on a bank in one place and deposited in a bank in another place involves greater complications. To send directly to all other banks the checks drawn on them would require a prohibitive amount of labor and expense, both for the sending and the remitting banks. It is necessary, therefore, for each bank to employ other banks for check collection purposes. Before the establishment of the Federal Reserve system, the banks of each city were employed as collection agents, receiving checks drawn on banks in the vicinity from other banks throughout the country

and from these neighboring banks checks on banks in other sections. If the check was drawn on a bank at a great distance from the bank in which it was deposited, it would ordinarily pass through a number of city institutions while in process of collection. Thus, for example, a check drawn on a rural bank near Des Moines, Iowa, and deposited in a bank in Manchester, New Hampshire, might be sent by it to a Boston bank, then to Chicago, whence it would be forwarded to Des Moines, and then finally to the bank on which it was drawn.

If the collection of checks drawn on banks in other places had been developed in the United States without reference to other banking activities, doubtless the most economic possible arrangements for handling this business would have been everywhere adopted. In Boston an arrangement for handling checks on New England banks through the Boston Clearing House was adopted in 1899. All checks on New England banks deposited in Boston banks might be sent by them to the Clearing House for collection. Checks on each bank were there assembled and sent in a single letter, remittance being made in a single draft payable to the manager of the Clearing House. Banks in a few other cities adopted similar arrangements, but in most parts of the country the keen competition of city banks for balances of country banks proved an insuperable obstacle. In addition to interest at the customary rate of two per cent. city banks offer various services

in return for bank balances. The most important of these services has long been the collection of checks. Taking advantage of the competition for balances, country banks in many parts of the country made excessive exchange deductions in remitting to banks elsewhere in settlement of their own checks. Often these deductions were far in excess of the cost of shipping currency, which indeed, it may be added, it was seldom necessary to send. The city banks absorbed these exchange charges but to recoup themselves required the maintenance of compensating balances far larger than it would have been necessary for country banks to maintain for other purposes. At the same time, wasteful time-consuming methods of routing checks were resorted to by the city banks, in order to reduce to a minimum the exchange charges which they were absorbing.

Under the operation of the Federal Reserve banks, the system of check collections has been greatly simplified and improved. Each reserve bank collects for its members and also for non-member banks within its district checks drawn on all banks throughout the country which will remit to any reserve bank at par. No charge is imposed to cover the cost of the service, and through the reduction of balances with other banks and of clerical expense and postage made possible by concentrating the business of check collection, the system is likely to prove in the long run of advantage to most banks, even to those which

had been reaping profits through exchange charges. In 1929 all but about four thousand of the twenty-five thousand and more banks in the United States had assented to this arrangement. Checks on the banks, mainly small country banks in the West and South, that still make exchange deductions, continue to be handled by the old haphazard methods that obtained generally before the establishment of the reserve system.

The bank deposit, circulated by means of checks, is the most convenient medium of payment yet devised. A stroke of the pen transfers it in whatever amount is needed for the largest transaction, and this transfer instantly becomes the basis for fresh operations, with as complete security against accidental loss as can be imagined. In the strict economic sense this medium no doubt has rapidity of circulation in a high degree, while in the sense of actual activity of movement in a given time it far outstrips money or notes, and has been well said to be the most volatile of all the mediums of exchange. Of the entire circulating medium of this country it forms incomparably the greatest, although the least considered, part. Depending for its efficiency solely upon convention, it for the most part eludes the regulations which legislatures so industriously enforce upon the other constituents of the currency. Indeed, beyond the requirement of a minimum reserve made by the law of the United States, and of most of the several States, we may say that the subject is not touched

by legislation, in this country or elsewhere. The necessity for payment in specie or legal-tender paper upon demand, the chief safeguard of value, is the result of general provisions for the payment of debts of any kind. And the chief assurance against excessive expansion on the part of any single bank, though not as will be seen in later chapters against excessive expansion by all banks, is given by the certain demand for prompt and frequent settlement, occasioned by the voluntary establishment of the clearing house, or by the habits of the community but not by law.

What natural limit is to be found then to the continued circulation of a liability for deposit, when once it is created and set in motion by the process of "discount"?

Plainly, if at any stage the holder of a check, instead of depositing it, demands its payment in money by the bank on which it is drawn, the payment extinguishes the liability. It is, to be sure, quite possible that the money, after a brief circulation, may find its way back in fresh deposits of cash made by one or more individuals, and so a new liability similar to the old one may come into existence; but, nevertheless, we may fairly say that the use of the original deposit as a substitute for money came to a natural close with the payment of the check. Except, however, in the cases where money is required for some special purpose, as to be sent abroad or to some other part of the country, or for the increase of the stock in the

hands of the public, this limit to the circulation of deposits is not of great importance. For, as the withdrawal of money under ordinary circumstances is merely the exchange of one medium of payment for another, any withdrawal on a large scale would imply such a change in the habits and preferences of the public as is not often or easily made.

A more important limit is found, however, in the use of deposits for the payment of debts due to the bank. That the depositor can, to the extent of his deposit, pay a debt due from himself to the bank by the relinquishment of the bank's debt to him, needs no explanation. In practice he draws his own check in favor of the bank and exchanges it for the obligation held against him by the bank, this mutual release being for each side as effectual a discharge of liability as a payment in money could have been. Such a payment of the debt due by the depositor, and previously standing among the securities or loans of the bank, finally cancels a liability of the bank equal in amount to that which was created when the loan was made.[1] It matters little by what process the deposit, or right of demand, finally used by the depositor in payment came into his possession. If he is a merchant, he has probably collected smaller sums which were due to him, for the purpose of his payment to the bank, and these smaller sums are likely to have come to his hands

[1] Compare the statement of account for operation *b*, p. 42.

to a great extent in the shape of checks, which, as we have seen, were the instruments for transferring to him the rights of demand which others held against the bank. If he borrowed the means of payment, he in all probability received the amount in a check. Nor is the case different when there are several banks, and the depositor has received his collections in checks drawn upon other banks than his own. As was seen when we were considering this method of payment on page, 45 the deposit of these checks to his credit effects a transfer of the liability from the other banks to his own; and here also this liability is finally extinguished when he uses it in payment of his debt to the bank.

It is possible, indeed, that the payment should be made by the debtor to the bank in money, or by a check drawn against a fresh deposit of money, and in this case either there is no extinguishment of bank liability by the payment, or only the new liability created by the fresh deposit is extinguished. But in a community where banking is firmly and widely established, the large payments of commerce and of general business are certain to be made, for the most part, in the medium which is most accessible and most convenient for use in large sums, and this medium is undoubtedly that which is commonly termed bank deposits.[1]

[1] A series of investigations made by the Comptroller of the Currency show that more than ninety per cent. of the National Bank deposits consist of checks and similar instruments. The

It appears then that deposits are created by the act of the bank, when loans are increased, and that they are cancelled when loans are paid.[1] There is, therefore, a rough correspondence between the movements of loans and of deposits. This correspondence may be weakened by the actual flow of money to or from the bank, but in the ordinary movements of business it is tolerably close, and where it fails the apparent exception will be found to be explained by some special condition of the case.[2] It will be found in general that, at times

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following table presents the relative percentage of money and credit substitutes for money in the deposits of the National Banks on particular days in the years 1896 and 1909:

	July 1, 1896	*March 16, 1909*
Money	7.5	4.7
Checks, etc.	92.5	95.3

Kinley, *The Use of Credit Instruments for Payments in the United States*, pp. 29, 184.

[1] For some striking remarks on this subject, see Hamilton's report on a National Bank, *Works* (Lodge's edition), iii., 128. See also *Quarterly Journal of Economics*, i., 403.

[2] The weekly statements of the New York banks for November, 1890, are a good illustration of the movement of loans and deposits, at a period of great financial disturbance, when there was a heavy contraction of loans and some serious withdrawals of cash. The aggregates, stated in millions, are as follows:

	Loans	*Deposits*	*Specie and Legal Tender*
November 1	$399.8	$396.3	$99.8
" 8	398.9	392.2	95.5
" 15	393.3	386.6	95.8
" 22	387.3	381.7	95.5
" 29	384.6	378.6	95.

when banks are increasing their operations, their deposits swell, and that when they are contracting, their deposits fall. The true connection between these movements is often forgotten, but its nature cannot be mistaken by anybody who will observe the steps by which an ordinary "discount" is placed at the command of the borrower.

It has already been suggested that the use of checks is most highly developed among the English-speaking peoples. The American or Englishman who is in the habit of receiving and making frequent payments avoids the keeping of cash in hand, deposits his receipts, and pays all except the smallest sums by checks. As a consequence, the establishment of a bank is an early symptom of the growth of trade in a small community of English blood. On the Continent the practice of depositing with a bank developed more slowly, and even now when this habit has become general deposits are not made available for payment by the common use of the check. Coined money and bank notes are used for most payments and consequently the banks are unable to extend credit very far in the form of deposits. The imposition of stamp taxes and the failure to surround the check with simple and effective legal safeguards sufficiently account for the comparatively slight use of this important credit instrument. Its utility has in recent years come to be very generally recognized, and in various

European countries payments by means of checks are being urged by banks and public authorities.

NOTE

To illustrate the working of the Clearing-House system, we will suppose the case of six banks carrying on business in the same town. On a given morning we will suppose the messengers of these banks to meet at the Clearing House, each bringing the checks received by his bank in deposit on the previous day, as follows:

No. 1, checks on No.	2,	$ 6,500
" " "	3,	9,200
" " "	4,	7,100
" " "	5,	6,250
" " "	6,	4,500
		$33,550

No. 2, checks on No.	1,	$ 7,800
" " "	3,	4,100
" " "	4,	5,760
" " "	5,	6,340
" " "	6,	5,870
		$29,870

No. 3, checks on No.	1,	$ 6,750
" " "	2,	4,270
" " "	4,	5,900
" " "	5,	6,400
" " "	6,	5,940
		$29,260

No. 4, checks on No.	1,	$ 8,750
" " "	2,	4,700
" " "	3,	6,740
" " "	5,	5,820
" " "	6,	5,140
		$31,150

No. 5, checks on No.	1,	$ 8,740
" " "	2,	4,620
" " "	3,	9,250
" " "	4,	7,680
" " "	6,	5,940
		$36,230

No. 6, checks on No.	1,	$ 3,700
" " "	2,	4,100
" " "	3,	6,740
" " "	4,	9,250
" " "	5,	7,850
		$31,640

The sum of all the checks brought in is $191,700. If, now, we credit each bank with the checks which it presents against the others, and charge it with the checks presented by them against it, we shall find that No. 1 is charged with $35,740 and credited with $33,550, that No. 2 is charged with $24,190 and credited with $29,870, and so for the others, and, therefore, that,

No. 1 owes a balance of	$2,190	
No. 2 *is owed* " "		$5,680
No. 3 owes " "	6,770	
No. 4 owes " "	4,540	
No. 5 *is owed* " "		3,570
No. 6 *is owed* " "		4,250
	$13,500	$13,500

If, then, the debtor banks, Nos. 1, 3, and 4, pay into the Clearing House the sums due from them amounting to $13,500, and the Clearing House pays out to the creditor banks, Nos. 2, 5, and 6, the sums due to them, of like amount, the result will be that every bank will, in effect, have collected payment of all the checks which it had received, and will have made payment of all the checks drawn against it. This settlement of checks amounting in all to $191,700 will have been made by the payment of $13,500, and transactions apparently involving thirty separate demands, each bank being the creditor of five others, will have been settled by a series of additions made at a central office, followed by three payments to and three payments from a common fund.

CHAPTER V

BANK-NOTES

It has already been said that the notes of a bank are a liability distinguishable in form, but not in substance, from its deposits. The creditor of a bank of issue has his choice between taking the evidence of his right in the form of a note and taking it in the form of an entry in a book. For his use one form may be preferable to the other; if he desires to make payments in small sums, as for wages, he may prefer to take notes; if he is to make large payments, or expects a little delay in the use of his funds, he is quite certain to prefer being credited with a deposit. But, whatever his choice, the liability of the bank to make payment in money on demand is the same, and it is under the same necessity of providing itself with a reserve, sufficient to meet any demand which experience shows to be probable. To illustrate this part of the subject we will take the account given on page 42, and suppose the depositors to have drawn one tenth of their demand deposits in

notes of the bank, which have thus been thrown into circulation.

Resources		*Liabilities*	
Loans . . .	$937,000	Capital . . .	$100,000
Bonds and stocks	171,000	Surplus . . .	74,000
Real estate .	30,000	Undivided profits	13,150
Other assets .	38,000	Notes . . .	80,675
Reserve. . .	190,925	Demand deposits	726,100
		Time deposits .	73,000
	$1,366,925		$1,366,925

It is obvious from inspection that if any demand upon the bank weakens its reserve, it makes no difference whether the demand is from depositors or note holders; the funds available to meet subsequent demands for payment are reduced to the same degree in either case, and the same precautionary measures for replenishment will have to be taken. And so, if fresh loans are made, the relation of reserve to demand liabilities is altered, whether the loans are effected by an increase of deposits or of notes.

In the absence of special legislative restrictions, the two forms of liability seem to stand upon the same footing. The bank itself finds the same advantage in the one as in the other. Its profit is made from the securities which it holds, and whatever profit it makes beyond the mere interest on the investment of its capital results from the holding of securities purchased by means of its credit and of the funds deposited with it; but the rate of this profit is in no way dependent upon the process

by which that credit is transferred from one creditor to another.[1]

The bank, in short, is interested simply in providing that form of credit which is most convenient for the use of the community on which it depends, for it is by that means that it can do the greatest amount of business and hold the greatest amount of securities. The deposit, transferred by check, is more convenient for large transactions than the note, being more expeditious and safer. The safety of the deposit is due to the fact that the check, being usually payable "to order," especially when the amount is considerable, cannot be drawn or credited to its holder unless endorsed by the payee. If lost or stolen, therefore, it cannot be paid unless the bank is deceived by a forged endorsement, in which case the loss falls upon the bank itself. Bank-notes, however, being payable to bearer are nearly as difficult to trace as money.

[1] Of the writers on banking, McLeod, *Theory and Practice of Banking*, has made the most careful analysis of the exchange which underlies every banking operation. Notwithstanding eccentricities of method and style, his exposition of the real meaning of "loans" and the ambiguities incident to our use of that term, the origin and purport of bank liabilities, and the substantial identity of the liabilities for deposits and notes, is clear and important, and might be cited in confirmation at many points in these pages. Reference may also be made with advantage to McLeod's smaller work, *Elements of Banking*.

Among earlier discussions, attention is specially called to a striking letter by James Pennington, in Tooke's *History of Prices*, ii., p. 369, in which the strong analogy between the deposit accounts of the London private bankers and the notes of the country bankers is forcibly stated and explained.

Up to this point in the analysis of the nature of the liability of banks for notes and deposits it has been assumed that banks were as free to extend credit in the one form as in the other. But this has seldom been the case, and hardly anywhere for any considerable period of time. Note issue has always been restricted to a single institution in some countries, and this policy has been adopted in other instances after experience with notes issued by numbers of banks. In those countries, moreover, in which all banks may still issue notes, the privilege has been subjected to special and generally increasing restrictions. It is therefore evident that changes in the volume of notes in circulation in practice involves much more than a mere exchange of one liability for another of an essentially similar character.

Statutory provisions relating to the issue of notes have been designed in the main to attain two objectives—protection of note-holders from loss in the event of the failure of individual banks, and the prevention at least in part of undue credit expansion by the banks generally. Particular legislative measures have frequently been designed to serve both of these purposes, but it will be convenient to consider them so far as may be as distinct problems, taking up first the protection of noteholders from loss through bank failures.

The similarity of the two kinds of liability —notes and deposits—might seem at first sight to furnish the basis for an equitable claim for equal

consideration on behalf of depositors, but a moment's thought will suggest that, however similar they may be to the bank, in actual use there are important and far-reaching differences. Among these differences, there is one that has lost much of the significance that might perhaps have been attributed to it in the past. Depositors as a class might be supposed to be better informed and better able to protect themselves, and so to have less claim upon the sympathy and guardianship of the legislature. This was in some measure true when the number of depositors was small, composed mainly of those engaged actively in business. But depositors are now numbered by millions. A checking account has become indispensable throughout wide circles in the community, and still more numerous are those who have entered into relations with banks as savings depositors. It is only a most exceptional depositor who is in position to form an intelligent judgment regarding the probable condition of a bank. From bank statements no definite conclusions may be drawn since they disclose merely the total amount of various kinds of assets; they tell nothing about the quality of the assets. Only those who possess intimate knowledge of the character and ability of the management of a bank can feel assured, especially if the bank is of small or even moderate size, that the risk of failure is so remote as to be negligible.

The case for the special safeguarding of issues

of notes rests primarily upon the fundamental requirement that there shall be no difference in the quality of the various constituents that compose that portion of the circulating medium which passes from hand to hand in making payments. Governments recognize this essential requirement, and withdraw coin which has fallen below a slight fraction of its full specie content. A currency which imposes upon the public the burden of attempting to discriminate between numerous banks on the basis of solvency is a source of constant dissatisfaction and inevitably leads to persistent demands for legislative correctives.

Among the simplest of the provisions for the safety of notes have been the limitation of the note issue of a bank to its paid in capital, and a preferred claim to some portion or to all of the assets, to the holders of notes in case of insolvency. The capital requirement does not go far, but it has the obvious advantage of reducing to an indeterminate extent the amount of obligations to noteholders that banks might have incurred before failure. The effect of giving noteholders a preferred claim may be illustrated easily starting from the following statement of account:

Resources		*Liabilities*	
Loans . . .	$217,000	Capital . . .	$100,000
Bonds and stocks	105,000	Surplus . . .	30,000
Real estate .	15,000	Undivided profits	3,150
Other assets .	4,000	Deposits . . .	187,850
Reserve. . .	73,925	Notes . . .	93,925
	$414,925		$414,925

The liabilities of the bank are plainly of two classes: the liability to stockholders for capital, surplus, and undivided profits, and the liability to general creditors for deposits and notes. If the affairs of the bank were to be wound up, by reason of losses, or for any other reason, it is clear that, in case of any deficiency of resources, the general creditors must be paid first in full, and that only the residue after such payment can be said to be the property of the stockholders and divisible among them. If, for example, it proved that, by reason of failures and losses, the loans, bonds, real estate, and other assets, instead of being worth $341,000, which was their original value, were worth only $225,000, we should then have a total of resources amounting to $298,925, leaving, after the payment of deposits and notes, only $17,150 to be divided among the stockholders, the disaster having swept away their supposed surplus and more than four fifths of their capital. We may go farther and suppose the depreciation to have reduced the value of the total resources to $250,000, in which case the creditors must be satisfied with a dividend of a fraction more than 92 per cent,[1] and the stockholders are seen to have

[1] If we suppose the law to make the stockholders liable as individuals for the debts of the bank, they would under these circumstances be subject to an assessment, in order to make full payment to the depositors and note-holders. For the liability of stockholders under the national-bank system of the United States, see *Revised Statutes*, § 5151; also United States *vs*. Knox, 102 U. S. Rep., 422.

lost all that they had embarked in the business.

In these cases the depositors, holders of notes, and other outside creditors, all, in short, who can properly be regarded as creditors, stand upon the same footing, no favored class among them having any preference unless by virtue of some special legislative provision. We may now suppose that the legislature, for the protection of the holders of notes, has given them a right to be paid in full in preference to other creditors, if the assets of a bank in liquidation should fall short.[1] Upon this supposition, from the total resources amounting to $250,000, we should first have the notes paid in full, amounting to $93,925; and then the remaining $156,075 would be divided among the depositors, giving them a dividend of a little more than 83 per cent.

A provision of law, then, giving the holders of notes a preferred claim to the assets of the bank would be a natural and easy method of insuring this class of creditors, except in case of a very large issue or a very bad failure. But we may suppose the legislature to wish to go farther than this and to give the note-holders, not a general claim in preference to others, but a claim to specific property of the bank supposed to be of solid value and sufficient to insure payment of the notes in any case. Thus, to return to the account on page 65, it

[1] *E. g.*, see New Hampshire *Compiled Statutes of 1853*, ch. 148, §30. For objections see *Comptroller's Report*, 1898, p. xiii, *et seqq.*

appears that the bank holds bonds and stocks to the amount of $105,000 as a part of its securities. Suppose, then, that the law requires the bank to hold these bonds and stocks pledged to secure the ultimate payment of its $93,925 of notes. Under such an arrangement, the securities would not cease to be the property of the bank, and the earnings of the securities would remain, as before, a part of the profits of the bank. The pledged property would be enjoyed, however, subject to the provision that, in case of the failure of the bank, the proceeds of the securities should be applied first to the payment of the outstanding notes. If the law should go farther and provide that only certain approved classes of securities should be used for this purpose, and that the securities pledged should be lodged for safe-keeping in the hands of some public officer, the substance of the transaction would still be unchanged. It would still remain a simple case of the specific appropriation of a certain part of the property of the bank to the payment of a particular class of its liabilities in a given contingency. The essential structure of the bank would be unchanged and the sources of its profits would be neither more nor fewer than they were in the absence of this pledge of securities.

The method described in this supposed case, of protecting the issue of notes by a deposit of securities in the hands of some public officer, is that which was adopted by the State of New York in

1838[1] and was long known as the "free-banking" system.[2] Many other States followed the example of New York, and finally in 1863 the New York plan was adopted by Congress as the basis for the national-banking system.

If, now, we vary the above supposition so far as to imagine the property pledged for the protection of the notes to consist, not wholly of securities, but of securities to a certain amount and of specie for all notes issued in excess thereof, we shall have in substance the provision made by law in 1844 for the protection of the notes of the Bank of England.

Besides other reasons, already adverted to, for seeking legislative protection for bank-notes, the belief has been common that banks are under a special and dangerous temptation to overissue notes, thus causing their depreciation with loss to the public. Much here depends upon the type of banking organizations. In the absence of special restrictions there is greater danger of excessive credit expansion in the form of bank-notes than in the form of deposits by particular banks if the number of banks issuing notes is large. This greater danger of overissue is due to a difference that is likely to be made in the treatment of bank-

[1] For an account of the New York system and its adoption by other States, see Dunbar, *Economic Essays*, pp. 317–329.

[2] The term "free banking" was applied to this system because the law of 1838 was the first general banking law in New York. Previously a special charter was necessary in the case of each bank.

notes as contrasted with checks as they are received by the banks from the public in regular course of business.

Reference has been made in a preceding chapter to the system by which, in most banking centers of any importance at the present time, banks holding checks drawn upon each other settle their accounts by means of a Clearing House, where checks are exchanged and the resulting balances are paid in cash. A moment's consideration will show that this method of systematic and early presentation of demands must act as a strong and salutary restraint upon the undue expansion of deposits by any particular bank. Against a general imprudent expansion by the banks of a community, acting under the impulse of some wave of overconfidence or of speculation, there appears to be no safeguard except that which may be found in the relations of the community in question with others. The larger volume of checks which a bank presents at the Clearing House will be offset by the larger volume of checks drawn upon it which other banks have received. Excessive credit expansion on the part of the banks generally can only be avoided by the adoption of a conservative loan policy. But if a single bank, or a group of banks, imprudently expands its loans by the use of its credit, it must soon begin to face the effect in the demands for settlement made upon it through the Clearing House. It may be able to reckon with some confidence on the omission of

some depositors to draw promptly for the amounts due to them, but whatever checks are drawn it must be prepared to meet without delay, for few checks for any considerable amount, when they have once left the hands of the drawer, will fail to make their way quickly into the deposits of some bank and to appear at the Clearing House on the following morning.

It must be added that the operation by which demands are presented through the Clearing House is one in which the banks presenting the demands are scarcely voluntary agents. They are aware that they must meet checks drawn upon themselves and are impelled in self-defense to present by way of offset all claims that they can bring forward against others. Demands which they might conceivably delay under a looser system, or press with less regularity, it is for their interest to bring forward at once as a part of their own provisions for the inevitable daily call to be made upon themselves. Even the possible disposition to forbearance, which a creditor bank may feel in a particular case, must be weakened by the consideration that others will not fail to require any payments that may be due to them, and that by forbearance the bank only consents to the preference of their claims over its own. The prompt presentation of checks for payment is therefore the established practice, implying no jealousy, hostility, or suspicion on the part of the creditor bank,—being in fact the natural disposi-

tion to be made of an instrument of credit intended to be but short-lived.

The differences of situation among banks are so great and convenience of intercourse varies so much even in any limited district, that the law would have found it difficult to create and enforce any such effective system of compulsory daily redemption of obligations as the banks of cities have developed and set in operation of their own accord. The observed tendency is, moreover, to enlarge the scope of the system, bringing outlying banks more and more within its reach and quickening the course of business between different banking centers. This voluntary development of a system so searching and restrictive is unquestionably due to two characteristics of the check, which hinder its continued circulation. In its ordinary form the check carries no guaranty or other recognition of obligation by the bank on which it is drawn, so that prudence calls for its speedy collection, unless the holder is willing to depend upon the signature of the drawer and such endorsements as the check may bear. Moreover, as the amount for which the check is drawn is determined by the transaction in which it had its origin, it is little likely to be convenient for use in making any further payments, and its division or merger in any larger amount is not readily effected except by depositing it. The nature of the instrument then has led inevitably to the development of a practice which, once adopted, is

recognized as one of the most important of existing safeguards against the abuse of bank credit by a single bank or a small number of banks.

Bank-notes have no similar tendency to speedy return. Although the obligation expressed by them is, in origin, purpose, and most of its effects, substantially identical with that which exists between the bank and its depositors, the evidence of the obligation is essentially different. Bank-notes express a direct promise by the bank, of payment to be made to the bearer; they are also issued in convenient denominations, and therefore adapted for continual circulation like coin. They may come back to the issuing bank in payments or may be deposited, but their return by these channels is uncertain, especially where there are many banks of issue. Their return is seriously hindered, moreover, by the fact that it is generally easier to use them than to present them for payment. For the holder, whether an individual or a bank, this is certain to be a controlling consideration, and one that is quite independent of any question as to the comparative abundance of currency or the extent to which bank credit is expanded. If there is but a single issuing bank, or if a large part of the circulation is issued by a few banks which make a compact group, the demand for specie for export, which is the natural corrective for an excess of currency, may sometimes be satisfied most conveniently by presenting notes for redemption. But if the issuing banks are many, and especially

if they are scattered geographically, the operation of this corrective will obviously be slower by reason of the number and inconvenience of the demands for redemption needed for making up any considerable amount of coin. Under such circumstances a bank-note currency once set afloat in excess or become excessive by a change in the condition of business, may be slow in coming to the mark to which, if really convertible, it must eventually adjust itself.

The systematic reduction of bank-notes, as an insurance against their possible excess, is therefore developed with much less ease and certainty than the corresponding restraint upon the use of credit in the form of deposits. The end to be sought—a wholesome restraint of a kind of credit which is easily abused—is the same. Indeed, public opinion and the law generally proceed upon the assumption that the use of the right of note issue is practically open to abuse, and that, for the protection of the public, special and sometimes elaborate precaution is necessary. Still the immediate convenience of the holder of bank-notes, for the reasons given above, is stronger than the more remote public interest, so that some form of pressure is usually needed for the development of an effective system of redemption among any large number of banks.

The Suffolk bank system of New England, the most effective note-redemption system which has existed in the United States, was forced upon

the banks of that section by the concerted action of a few strong city banks, which found their natural field of circulation in Boston seriously invaded by country issues.[1] The pressure thus established was finally made decisive by a legislative act which, in Massachusetts, forbade any bank to pay out any notes except its own, and thus compelled every bank either to send in for redemption any notes of other banks received in payment or on deposit, or to hold them as dead cash. The agreement under which the few Scotch banks have for more than a century returned each other's notes through a clearing house[2] is a striking case of competition by few competitors in a limited field, and so, too, is the practice by which the somewhat larger number of banks in Canada[3] send in for redemption the notes of their competitors. In each of these cases the struggle for a narrow field, intensified by the direct competition carried on by rival networks of branches, brings motives into play and creates a possibility of common action for mutual convenience which have no existence where the number of banks is large and their distribution greatly scattered. To take for illustration the 7600 national banks of the United States—no single bank can feel that its

[1] Whitney, *History of the Suffolk Bank.*

[2] Graham, *The One Pound Note*, chs. xv. and xvi.

[3] In Scotland there are only ten banks which are authorized to issue notes; in Canada there are ten, but, unlike Scotland, new banks enjoying the privilege of note issue may be established.

own power of circulation would be appreciably affected if it were to present for payment such notes of its 7599 competitors as it might chance to receive. The infinitesimal gain in this respect could not be counted in comparison with the inconvenience and delay to which it would have to submit. The natural course must be for each to extend its own circulation wherever the opportunity is found for doing so with profit, and to trouble itself as little as possible with respect to the circulation of others.

Systems of regular redemption cannot prevent the overissue of notes by banks generally or loss to note-holders through the failure of particular banks. They may limit these evils to such manageable proportions that they can be almost entirely eliminated by means of legislative safeguards which do not take away the right of issue from the banks in general and do not deprive the note of its value as an instrument of credit. In Canada, for example, note-holders are adequately protected and excessive issuing has been avoided under laws which limit the circulation of each bank to its capital and a proportion of its surplus, give the note holder a prior lien on the assets of failed banks, and provide for a guaranty fund to which each bank contributes an amount equal to five per cent. of its outstanding notes. On the other hand, in countries where there has been no system of regular redemption the evils of excessive issues of notes and frequent loss to note-holders

have required drastic remedies which have fundamentally changed the character and utility of the bank-note.

Two distinct and radically unlike policies have found expression in the legislation designed to provide a satisfactory bank-note currency. In the various States of the United States before the Civil War, banks generally were permitted to issue notes but subject to increasingly stringent conditions. The limitation of issue to the capital of each bank and a prior lien on all assets were found to be inadequate to safeguard note holders. In one State after another during the years immediately preceding the Civil War the requirement was imposed of the pledge of particular securities, commonly the bonds of the various States. This method of safeguarding bank-notes was subsequently adopted in the National Banking Law of 1863 with the further restriction that only United States bonds could serve as security of the notes of the National Banks.[1]

Under this method of note issue a perfectly

[1] The unsatisfactory condition of the bank-note currency in the United States before the Civil War could not have been wholly corrected under redemption arrangements. The business of the country, mainly in the pioneer stage of agricultural development, did not provide the banks with loans having a high degree of liquidness and security. Means of communication were imperfect and consequently even the notes of the strongest banks were at a discount when at a distance from the locality of the issuing bank. Finally, owing to the lack of uniformity in design, numerous counterfeit notes were a source of universal irritation, as well as of frequent loss to unfortunate individuals.

safe medium of payment is secured, but notes secured by bonds are fundamentally unlike notes issued generally by the banks without restriction, or those issued under restrictions such as are found in the Canadian Banking Law. In the case of bond-secured notes all other considerations are sacrificed in order to gain absolute safety. Such notes are not a credit instrument, expanding and contracting with the variations of activity of trade and in response to changes in the volume of bank loans. The amount of notes in circulation is primarily determined by the price of the bonds required as security. At the best, such notes are little more than a safe and economical substitute for coined money. They have little direct influence upon the other operations of the banks by which they are issued. In fact, such notes are more analogous to convertible government paper money than to bank-notes which are issued as a form of credit.

In England and in some of the other European countries, unsatisfactory experience with unrestricted issues of notes by numerous banks in the absence of arrangements for regular redemption led to the adoption of the drastic remedy of the grant of a more or less complete monopoly of issue to a single bank. By this means a safe currency was secured without depriving the bank-note of its character as an instrument of credit. This method of controlling the issue of notes had, however, entirely unforeseen consequences of a

most far-reaching nature. Wherever, and this is everywhere in the early stages of the development of banking, the bank-note was the principal instrument of bank credit, all other banks were placed in a position of constant dependence upon the institution to which the monopoly of issue was granted. At the same time these banks became inevitably responsible for the satisfactory working of the entire credit structure of the countries in which they were established. This responsibility was not clearly recognized at first by the management of these banks, but after much often unsatisfactory experience the special function and duties of these central institutions were clearly perceived. It became generally recognized that a banking system is greatly strengthened by the presence of a central institution which accepts responsibility for safeguarding the credit structure and consequently maintains itself in a condition of great strength at all times.

Bank-notes issued by a single bank are in many ways unlike bank-notes issued by a large number of institutions. When numerous banks enjoy the right of issue, the notes never acquire that prestige which the note of a single institution possesses in its own country. The bank-note in such countries as France and Germany occupies a position midway between gold and the ordinary bank-note. It will be accepted for practically every purpose except for foreign payments. The power to issue an instrument which has this special

sort of prestige is of very great value in emergencies. It enables the central institution to supply an almost indefinitely large demand for currency for domestic purposes without involving itself in any appreciable danger of loss of gold through the presentation of the notes for redemption. On the other hand, if notes are issued by many banks, in a serious emergency it may happen that the public loses confidence in the notes and manifests a preference for gold. Bank-notes issued by a single institution have, then, a very great practical advantage, they have a quality which the ordinary bank-note does not possess, at least in a country in which numerous banks, large and small, are permitted to issue notes. This consideration has been an important factor in shaping legislation regarding bank-notes in many countries. Central banks have been established, as in the case of the Federal Reserve banks in the United States, in order to secure the improvements in banking machinery and practice which they make possible. These institutions have then been granted a more or less complete monopoly of issue, not because it was impossible to secure a satisfactory currency issued by the banks generally but in order to enable the central banks to perform their special functions more effectively.

CHAPTER VI

CENTRAL BANKS

It is necessary, as we have seen, for every bank to keep some money on hand to meet counter payments, and also funds to meet what are commonly the more considerable requirements of settlements with other banks in the same place. Balances with banks elsewhere must also be maintained in order to facilitate payments to distant banks. The amount of money and balances required for these purposes in normal times is not large since receipts from all sources tend to offset withdrawals although of course not exactly from day to day. Banks having large pay-rolls to make up for depositors must carry exceptionally large amounts of money on hand, but generally speaking reserves of cash and balances in the neighborhood of ten per cent. of demand liabilities are found to be ample for ordinary requirements.

In the experience of all banks, however, there will be occasions when withdrawals of funds will be exceptionally large. Not infrequently also these withdrawals will be accompanied by demands for additional loans from regular depositors, demands which as a going concern a bank will

if possible endeavor to satisfy. A well managed bank with diversified loans and investments will ordinarily experience no difficulty in meeting a situation of this kind. It will reduce loans to borrowers who are not its own depositors; it may sell securities; and finally it may use its own assets as a basis for borrowing from other banks.

The effectiveness of these measures, it is to be observed, largely depends upon the ability of other banks to extend additional accommodation. The market for securities becomes at once restricted when would-be purchasers are unable by means of bank loans to secure a part of the purchase price. Call loans against securities listed on stock exchanges cannot be liquidated to any appreciable extent if the brokers to whom such loans are chiefly made are unable to borrow elsewhere. The payment of commercial loans as they mature is also largely dependent upon the continuance of the processes of production and marketing of goods and of payments for them by purchasers in normal fashion. Ability of borrowers, however, to meet these obligations is at once weakened if those to whom they regularly sell commodities experience difficulty in securing the usual amount of accommodation from the banks. Payments for goods already sold are delayed and new purchases are curtailed. A diminution in the total amount of commercial loans will accompany, though with some lag, a fall in prices, and a decline in the activity of trade, but for the banks to attempt to

contract such loans quickly and in large amount subjects business to intolerable strain and if persisted in occasions failures so numerous and widespread as speedily to threaten even the solvency of the banks themselves. In short, business cannot suddenly be deprived of the volume of credit to which it has become adjusted without disastrous consequences both to lenders and borrowers.

For the satisfactory conduct of the business of banking something more then is needed than reserves of cash sufficient for ordinary requirements together with loans and other investment which can be readily liquidated when one or only a few banks find it necessary to strengthen themselves. Somewhere in every banking system a reserve of cash and of lending power is needed to meet occasions when the banks find themselves confronted with unusual demands both for money and for loans. Provision for such occasions may be made through the maintenance of larger reserves of cash or balances in other countries than are regularly required by all banks, by a few banks or by a single bank. Where, as in Canada, banking is conducted by a few banks of large size this requirement has been recognized and adequately met by the several banks. But in countries in which banking has been conducted by numerous banks large and small the responsibility has been so widely diffused that this need has not been fully realized and consequently provision for periods of

financial strain has generally been entirely inadequate.

In an endeavor to remedy this defect which was repeatedly disclosed in the banking experience of the United States before the Civil War, the banks were subjected to legal reserve requirements considerably higher than the reserves needed in normal times. But in periods of financial strain the mere possession of reserves is not sufficient. They must be used. Where banks are numerous with no recognized leaders or strong combination among them, in any sharp crisis some of the bank managers may decide to take care of themselves by reducing their loans and filling up their reserves, and leave it to others to take care of the general welfare by enlarging discounts and satisfying demands of depositors for money. Knowledge that some may pursue a selfish course weakens the disposition and also the power of others to take a more liberal course, and this may lead all the banks to pursue a policy of contraction which is condemned by the judgment of the majority.

This difficulty of securing united action among many banks in emergencies was strikingly evident in successive crises in the United States after the establishment of the national banking system in 1863. Although the cash reserves of the banks were far in excess of what was needed for ordinary requirements, the banks in each crisis from 1873 to 1907 invariably endeavored to contract

loans and in the more serious of these crises, those of 1873, 1893, and 1907, partially suspended cash payments.[1]

The unhappy consequences to the community generally of the inability of the banks to cope successfully with emergencies finally led to the establishment of the Federal Reserve banks in 1914. This group of banks is patterned after the central banks which were then in operation in most European countries as well as in Japan and thanks to which periods of financial strain had been handled far more satisfactorily than in the United States.

In the analysis of banking operations in preceding chapters it was assumed that each bank enjoyed similar powers, and consequently aside from differences of size was equally responsible for the maintenance of the mechanism of credit in a sound condition and in effective operation. The presence of a central bank relieves the other banks of some portion of this responsibility. It introduces important modifications both in the powers of these banks and in banking practice. In later chapters the history of the three most important central banks, those of Great Britain, France, and Germany, will be considered, but for the understanding of the significance of those chapters a preliminary analysis of the powers, functions, and policies of central banks will be helpful.

[1] For some account of these crises see Ch. XI below.

The special functions of central banks may be grouped under three heads: they serve as fiscal agents of government; they have large powers of control over the currency through the more or less complete monopoly of note issue; and, finally, since they hold a large part of the reserve of the other banks, they are directly responsible for the foundation of the entire structure of credit. This last is by far the most important function of central banks. Indeed, in a general but very true sense, central banks may be said to have but this single function,—to insure the maintenance and smooth working of the systems of credit, of which they are the most important, though not necessarily the most considerable members. It is a duty which rests upon central banks because the other banks, which hold little or no cash reserves, rely upon their deposits at the central bank and upon the expectation of being able to borrow from it through rediscounts or direct loans.[1]

The centralization of bank reserves was not one of the objects in view when the first of the institutions that now function as central banks were established. Historically, it is probable that it came about in large measure as an unintended result of the monopoly of note issue and of the government business handled by them. Such is

[1] The London banks do not ordinarily borrow directly from the Bank of England. They withdraw money lent to bill brokers, who in turn are obliged to borrow from the Bank. The difference is one of form rather than of substance.

quite certainly the case with the Bank of England, the earliest central bank in date and the model for all others of its kind. Through its government business other banks were inevitably brought into daily contact with it, and the convenience of an account upon its books became readily apparent. Again, the partial monopoly of the right of note issue, in a period when banking methods were undeveloped, was an advantage which, along with its government business gave the Bank of England a position of unquestioned superiority, both in size and in prestige. From keeping a balance to keeping their entire reserve in the central bank required no essential change in the every-day methods of business of the other banks. This stage had been reached in England before the close of the eighteenth century and for generations English bankers have held in their own vaults only such amounts of money as are required for every-day purposes,—till money, as the English are wont to designate it. This custom was still further strengthened in 1854, when the plan was adopted, in the settlement of clearing balances, of simple transfers upon the books of the central institution. In other countries, virtually the same situation has been reached. Although the other banks may hold slightly greater amounts of cash, they carry balances, larger or smaller, with the central bank, and these balances as a reserve support the entire structure of banking credit.

This concentration of reserves gives to much of

the credit extended by central banks a unique quality of far reaching significance. Whatever the source of an increase in reserve balances may be, it permits the further expansion of credit by the banks as a group to an amount that is only limited by the ratio of balances to deposits that by custom or legislation is regularly maintained. Credit extended by a central bank therefore by increasing reserve balances provides the basis for an increase many times as considerable in the volume of credit extended by the commercial banks, precisely analogous to the effect of the acquisition of additional gold. Similarly, when a central bank contracts its credits, in the absence of the receipt of funds from other sources, it enforces upon the banks the necessity of credit contraction of much greater magnitude if the usual proportion of reserve balances to their own liabilities is to be maintained. It will thus be seen that a central bank by increasing or reducing its own loans and investments is in position to exert a powerful influence upon the supply of bank credit.

In addition to bankers' balances, central banks invariably act as government fiscal agents, holding all or at least the more active government balances. Increases and decreases in these balances affect bankers' balances in a reverse direction and consequently the available supply of bank credit. Some central banks, in particular the Federal Reserve banks of the United States and others

established in recent years, hold only government and bankers' balances. Others, though in general with a tendency for these to decline in volume, receive individual and corporate deposits, and make loans to their own customers like the ordinary commercial bank. In such instances, changes in this class of deposits have the same effect as changes in government balances on bankers' balances. If the amount of such deposits is not shown separately in published statements, changes in the reserve position of the commercial banks can only be roughly inferred upon the presumption that any considerable change in these deposits ordinarily reflects changes in bankers' balances because they are unquestionably the more variable constituent of the aggregate amount.

The importance of the privilege of note issue to central banks varies widely from country to country. Its primary service is to protect gold reserves from loss on account of increasing domestic currency requirements—requirements that arise from the growth of population and trade, a general upward movement of prices, seasonal demands especially in agricultural regions, or finally demands of an emergency nature in times of crisis or upon the out-break of war. All of these demands, except the last, are comparatively small in countries in which checks are in common use,

[1] Since November 1928, the Bank of England has furnished this important information in its weekly statement.

and it is significant that the Bank of England, restricted after 1844 to a note issue that was virtually a gold certificate, was able aside from emergencies to meet the responsibilities of its position with conspicuous success. In Continental countries the power to extend credit in the form of notes by central banks would seem to be indispensable, since the demands which they experience are chiefly for credit in that form rather than for the means of providing reserve balances.

It is further to be noted that the power to issue notes may be utilized to add greatly to the strength of a central bank. Owing to the general preference of people for paper money, after a surprisingly short experience with its use under stable conditions, as the stock of gold in a country increases much of it will be secured by the central bank in exchange for its notes. The large gold stock acquired by the Bank of France before the World War was largely a result of this process; gold instead of going directly into circulation was taken to the Bank and exchanged for bank notes.

To support public confidence in the strength of a central bank, and in order that it may be able to meet the responsibilities of its position, it is essential that a central bank should hold an ample reserve against its outstanding liabilities. There is of course no precise proportion of reserve which is everywhere adequate amid varying circumstances. The general character of the economic activities of a country, its financial

position relative to other countries, the size of its entire credit structure may well render a reserve that is adequate for one country quite insufficient for another. And here an important distinction is to be noted. Like the foundation of a building, the reserve regarded as a basis of confidence would seem to be something to be permanently retained as a support for the structure of credit. On the other hand, a reserve, or some part of it, is required for use. From it must come the gold to meet a foreign drain, and possibly one of domestic origin as well, while at the same time it may be incumbent upon the central bank to grant additional loans thus enlarging its own credit liabilities. Evidently then a central bank in ordinary times must endeavor to maintain a reserve sufficiently far above what may be deemed an irreducible minimum so that it will be able to meet whatever requirements for use that may be reasonably anticipated.

Provision of reserve funds available for use is necessarily a matter that must be left in the hands of those entrusted with the management of central banks, but the permanent reserve has everywhere in large measure been determined by legislative action, and in general a much higher minimum reserve requirement has been established than would seem to be needed as a basis for confidence exclusively. But legislation regarding reserves has been framed with a further objective in view. A requirement that a high reserve ratio be main-

tained restricts the amount of credit that may be extended by a central bank and so indirectly by the other banks. It lessens the danger that the supply of credit may be enlarged unduly upon the acquisition of additional gold, and in this connection it is significant that on this as on most other features of banking legislation action has commonly been taken after unhappy experience with the consequences of abundant credit.

Statutory reserve requirements, imposing limitations on the power of central banks to expand credit, when first employed, were exclusively concerned with note issues, and reflected the scant recognition of the essential similarity between notes and deposits. The Act of 1844, governing the issue of notes by the Bank of England furnishes a notable example, with which may be contrasted the Federal Reserve Act of 1913, which imposes definite reserve requirements against both notes and deposits. The same policy finds expression in the charters of various central banks which have been subsequently established, and also in the modified charter of the Reichsbank of 1924 and of the Bank of France of 1928.

In most countries on account of statutory requirements, and in all countries from motives of sound policy, the loans and other investments of central banks are confined to those which are deemed of the highest quality, a decided preference being given the trade bill over the collateral loan. The high quality of the assets is not, however, in-

sisted upon with the intention of converting them into money in times of emergency. A central bank is then either directly or indirectly the refuge of last resort for the other banks. Any attempt to call in loans or realize on securities would be directly opposed to the working principles of a central reserve banking system. It invariably happens at such times that the loans of central banks are largely increased.[1] The central bank then plays an active dominating rôle. Upon it rests the responsibility for maintaining specie payments, and also in large measure for the continuance of lending facilities to the business community. This responsibility was not clearly recognized, and the policy which should be followed in such situations was not clearly understood in the latter part of the eighteenth century and the early years of the nineteenth century. In some instances loans were restricted, with disastrous consequences not only to business but to the central banks as well. In other instances, loans were granted freely, but without that concomitant advance in the rate of discount required to influence foreign exchange rates and to drive away borrowers whose needs were not urgent.[2] For the last forty years

[1] There is, indeed, one kind of loan to which this statement does not apply,—the foreign bills held by many of the Continental central banks; but see p. 103 below.

[2] Macleod's *Theory and Practice of Banking* contains the best account of English banking experience during crises before 1860. See Chapters IX., XI., and XII.

at least the policy which should be followed has been clearly understood, largely owing to Bagehot's reiterated expositions in the *Economist*, finally embodied in more permanent form in his *Lombard Street*.

The policy of liberal loans though at high rates and the payment of money or notes to all who for any reason whatever may demand cash are now everywhere recognized as the guiding principles of action in emergencies. Experience in many crises shows that alarm can be allayed and that the actual withdrawals of cash and also the demand for loans will not be very considerable if a central bank possesses ample means to supply cash and to grant additional credit, and manifests no hesitation in making use of its resources. In carrying out its crisis policy as to loans and cash a central bank does not require any previous agreement with other banks, but at times still another method of relief which does require their cooperation has been adopted in practice if not in theory. Central banks have taken the lead, as in the Baring instance in 1890, in arrangements for the conservation of the assets of large banks which are not hopelessly insolvent and by preventing sudden liquidation have confined the disturbance within narrow limits. The machinery for such united action will hardly be set in motion in the absence of some person or institution of commanding influence in whom the business community has confidence.

The practice of making settlements between banks on the books of a central bank greatly reduces the withdrawals of cash during a crisis. Banks borrowing from the central bank take the proceeds of their loans mainly in the form of deposits since, aside from the case of a run by depositors, their requirements are chiefly for the purpose of making payments to other banks. The mere presence of a central bank removes the danger that other banks will adopt the short-sighted policy of hoarding their reserves, since the central bank is in position to insist that each bank shall use them if it is to secure such accommodation as it may require.

From the preceding pages the reasons will be evident for the general widespread adoption of a central bank as an essential part of a well-ordered banking system. Through such institutions there is gained a high degree of certainty that a reserve of cash and lending power available for emergencies will be maintained. The use of these resources in an effective manner and without hesitation when occasion requires is also assured. The community at large is relieved from the danger of attempts at wholesale loan contraction and confidence in the ability of the banks to maintain payments at all times is established.

In the event of a crisis the course that should be taken by a central bank is far more uniform and definite than that which will best serve the community during the intervening years. In general

it may be said that policies must be adopted that will maintain the bank in a strong position, measured both by the adequacy of its reserve and the character of its investments, and further that it is desirable to combat the development of those conditions that may be expected to culminate in a serious financial disturbance. These two objectives are not antagonistic. The primary duty of safe-guarding the credit structure upon a firm foundation of gold must necessarily compel at times the resort to measures that will restrain credit expansion, but it is also possible that such restraint may be desirable at times when the reserve of the central bank may be entirely adequate or even superabundant.

The ability of a central bank to build up or protect its reserve, or to execute other policies depends almost wholly upon its power to influence the aggregate supply of credit in the community and its cost. Since the credit which it extends largely serves to provide other banks with reserve balances, by changes in the amount of its loans and investments and by changes in lending rates a decided influence upon the credit situation may be exerted. The supply of credit may thus be increased or diminished, and the demand either restrained or stimulated. These are quantitative influences of far reaching significance. In contrast the qualitative power of central banks is extremely limited. Credit is a highly fluid agency. When once it has come into being, its

subsequent uses cannot be controlled. A central bank may indeed refuse accommodation to particular banks the operations of which may be deemed undesirable, but if it is at the same time satisfying liberally demands from other quarters credit will seep into those uses which are regarded with disfavor. Experience clearly teaches that for effective results in all ordinary circumstances quantitative weapons must be employed.

In order to be in position freely to exert its influence upon the supply and cost of credit, it is essential that a central bank should not assume obligations to furnish credit to particular borrowers, or at all events should confine business of this nature within narrow limits. For this reason, direct loans to individual and corporate depositors, though entirely proper in the case of other banks, are unsatisfactory. Business of this kind, common in the past with the older central banks, has tended to decline, reflecting the more definite recognition of their special functions, and more ample supplies of credit from other sources. If these customer loans make up but a small part of the earning assets of a central bank, they need not seriously hamper the execution of its major policies. Far more untoward consequences may be traced to the intimate relations with government finance. Leaving out of account the exigencies of war financing, a matter to receive attention in later chapters, there is always the danger that the execution of a sound credit policy may be obstructed through

governmental influence leading to the grant of direct loans or to the maintenance of undesirably easy conditions in the money market in order to facilitate the marketing of government loans at low rates of return to the investor. Government influence is certain in any event to have great weight with the management of a central bank, and since governments are more or less chronic borrowers, the direct participation of Treasury officials in the management of a central bank is of more than doubtful expediency.

The two chief avenues for the employment of central bank credit are loans to banks and bankers, and open market operations. They may properly be classed together because both are susceptible to control, and because it is through changes in the amount and cost of credit extended through either or both of these methods that the general credit situation is influenced and the reserve is maintained. The practice of direct borrowing by commercial banks from central banks exhibits wide diversity. In Continental countries, the banks make free use of this resource. In the United States the banks borrow, but there is not a little reluctance to do so except for short periods. In England the practice except in time of war, is unknown, but its place is taken by advances to dealers in bills or government securities who resort to the Bank of England when funds regularly available from other banks are in scant supply. Operations in the open market by

central banks are ordinarily confined to a limited group of investments which possess the important quality of ready marketability and are widely held by financial institutions and other investors as a means of employment of surplus funds. Bankers' acceptances and short term government securities most satisfactorily meet these requirements. Both the supply and the demand in the case of the former are sensitive to changes in rates, while for the securities of a government in good credit both purchases and sales of large amounts of outstanding issues can be readily arranged.

The most significant classification of the business of a central bank is however not that between loans to banks and open market operations, but rather that between credit granted at the initiative of the borrower and credit furnished at the initiative of the central bank itself. All loans to banks and bankers obviously belong to the first of these categories, and in addition the undisclosed portion of so-called open market operations that represents purchases of offerings made by the banks in lieu of applications for accommodation through the discount channel. On the other hand, a central bank may enter the market actively either as a buyer or a seller of bills and securities of the open market class. By this means it is able to intervene actively in the money market. In the absence of such transactions, it would be restricted to a far more passive rôle, dependent more completely upon such influence as

changes in its lending rates might have on the demand upon it for accommodation.

In the determination both of the amount and cost of the credit that it may wisely furnish, a central bank at least in ordinary times must give primary consideration to its reserve position. For the larger countries, gold would appear to be the only satisfactory constituent of the reserve. For the smaller countries, holdings of bills of exchange payable in the larger countries that are solidly on a gold basis and balances in those countries may in some measure take the place of gold as a reserve. Size is the determining factor, because the attempted withdrawals of cash in an emergency by a large country might well prove greater than could be met without serious difficulty in the foreign markets in which the reserve funds were placed.

When there is apparent danger that the reserve may decline below what is deemed an adequate ratio to outstanding liabilities, the supply of credit should be curtailed and its cost increased. Repeated experience furnishes convincing evidence of the effectiveness of these measures at all events when action has not been too long deferred. On the other hand, the question presents itself whether a high and rising reserve ratio affords a sufficient basis for the adoption of a policy of credit expansion and a lowering of rates. In the past this seems to have been the guiding principle in the determination of policy, and much can be

said in its favor. The reserve ratio is definite and obvious, and it is also impersonal. Its use minimizes the necessity for the exercise of individual judgment. Under normal conditions moreover the reserve of a central bank may be expected to increase but slowly and as a resultant of favorable economic conditions.

Although the reserve ratio has unquestioned merit, providing a simple and impersonal guide to policy, it is by no means entirely adequate. It must be supplemented by more intangible considerations that center about the probable effect on the business of the community of more or less credit at lower rates or higher. At a favorable moment in a period of industrial recession and readjustment at liberal credit policy may hasten a return to healthy activity. On other occasions, credit restraint may serve a useful purpose, checking widespread speculative dealings in commodities or securities, and a persistent advance in prices. The course of a reserve ratio does not always indicate the moment for action in either of these situations, and it is further to be noted that extraordinary influences may cause a rapid increase in the reserve, establishing a ratio far above that which has been customary or is required by statutes. Such was the experience of the Federal Reserve banks after the crisis of 1920. To have extended credit to the full extent that the reserve would support would have meant credit inflation of a most extreme character. It was

clearly a situation in which the probable consequences of credit expansion inevitably became the controling factor in the determination of credit policies.

The business coming to central banks, whether in the form of a demand for loans by banks and bankers or of offerings of bills, is highly irregular in volume, varying from country to country and everywhere with the activity of trade. In some countries, notably in France, a large number of small bills of exchange is regularly rediscounted at the central banks in order to take advantage of the extensive collection facilities which they have provided. Even in periods of depression particular banks, on account of circumstances peculiar to themselves, will require occasional accommodation. There will also be a more general demand from many banks in connection with the various settlements and payments which come at the end of each month, and especially at the end of each half year. Finally, in the northern hemisphere there is the seasonal demand which comes every autumn in connection with the harvesting and marketing of the great agricultural staples.

During periods of intense trade and speculative activity the demand for accommodation at central banks becomes more frequent and assumes larger proportions, though it may still continue to be highly irregular. Positive action, designed to prevent the depletion of its reserve, and if possible to increase it, must then be taken by a central

bank if it is to maintain itself in a strong position. The central bank no longer leaves the money market free to follow its own course but endeavors to subject it to some measure of control and to confine the expansion of credit within safe limits.

A variety of devices are made use of in putting into effect the policy which is required amid the conditions which develop during periods of general prosperity and widespread optimism. Direct means are frequently employed to protect the reserve from loss through gold exports or to induce gold imports. The Bank of France has relied in the past largely upon the device, peculiar to itself, of a premium upon gold withdrawn for export. In Germany the Reichsbank is said to have prevented gold exports by agreement with other banks even when there would be a clear and immediate profit from the operation. Many of the central banks facilitate gold imports by advances upon gold in transit. The Bank of England can within narrow limits change its buying and selling prices for gold in bars and for foreign coin. Many central banks regularly hold considerable quantities of foreign bills, which can be used to check gold exports and to secure gold imports. But this is in effect little more than a transfer of the location of the reserve unless the foreign bills were an excess reserve.

These various devices, with the exception of the premium policy of the Bank of France to be considered later in connection with the history

of that institution, are all of secondary importance, serving only temporarily and to a slight extent either to enlarge the reserve or to obstruct its depletion. They do not enable a central bank to check, much less prevent, further credit expansion which is invariably the fundamental cause of the difficulties with which the central bank is confronted.

There remains for consideration, however, one device, the sliding scale of discount, which is made use of by all central banks and which is of pre-eminent importance. This device, though in varying degree in different circumstances, is a means both of safeguarding the reserve and of moderating the influences tending toward excessive credit expansion.

Two specific objects are in view when the rate of discount is advanced—the diminution of the domestic demand for loans and a modification in foreign exchange rates so that gold exports may be checked and gold imports perhaps be stimulated. But an advance in the rate of discount by a central bank is of little service unless market rates follow the bank rate. When the strain upon the reserve is merely anticipated or of moderate porportions, it is frequently difficult to make the market follow the bank. If the other banks have abundant funds and if the necessity of caution is not obvious, the immediate effect of the advance of the bank rate upon the market rate may be imperceptible. The central bank

will then secure little new business. In countries where its proportion of the lending business is large, it is true that the increased demand for loans at the other banks will in the course of time force up the market rate. But, as the business of central banks is small in proportion to the total credit business in most countries, it may happen that the outside market is able to shoulder the entire lending business without advancing rates to the point desired by the central banks. In recent years both the Bank of England and the Bank of Germany have found it necessary with increasing frequency to deprive the market of its surplus funds. This is accomplished by the sale of government securities, and has answered its purpose to a striking degree. Its effectiveness is a direct consequence of the narrow foundation of balances with the central bank, upon which rest the vast liabilities of the other banks. In London, for example, bankers' balances amount to nearly two-thirds of the deposits of the Bank of England, say £60,000,000.[1] If these balances are reduced even by a million pounds through the sale of government securities by the Bank of England,[1] the

[1] The balances of the other banks would almost certainly be reduced by this step unless the securities were sold to individual depositors of the Bank of England. If the securities were purchased by the other banks or by their customers, checks in payment would swell the clearing-house exchanges of the Bank of England. If they were sold to bill brokers or their customers, the result would be the same, though there would be one or more additional transfers of credit required to complete the operation.

other banks are obliged to contract their loans and reduce their deposits by many times that amount, in order to preserve the customary proportion of balances to their credit liabilities. The credit structure is so delicately poised upon its foundation of Bank of England balances that it is sensitive to very slight influences.

The effectiveness of this device of withdrawing funds from the market, it is important to note, is in large measure limited to periods when the resources of the other banks are already well employed and no additional resources are becoming available. While it is of much utility in preparation for a period of financial strain which is in imminent prospect, it cannot be used to give constant control over the credit situation. When, for example, the course of foreign payments is such as to bring large supplies of gold into a country, a central bank may be unable to prevent the rapid expansion of credit on the part of other banks, even though such expansion may be responsible for the development of a highly hazardous state of affairs. Even should a central bank be able at such times to bring about a moderate advance in rates it is by no means certain that this would greatly strengthen the domestic banking situation. In periods of great business and speculative activity very high discount rates may indeed reduce somewhat the demand for loans for many purposes, but not necessarily the

demand for those which are most undesirable. A central bank is not an institution with powers sufficient to remove the causes of all financial ills. At times it can control, but more frequently it must rely upon the potent influence which a conservatively managed central institution acquires as the result of long years of wise operation. By example and precept the dangerously rapid expansion of credit by the banks as a whole in periods of active business may be somewhat diminished, but it would require an impossible and indeed undesirable exercise of power to control such tendencies. The measures which a central bank takes to keep itself in position to meet periods of financial strain, will to some extent moderate tendencies toward the dangerously rapid expansion of credit by the banks as a whole, but they will not eliminate such tendencies. General speculative movements have been less violent in Europe than in the United States, but this difference is properly ascribable, not to the absence of a central bank, but to the greater opportunities for rapid development in a new country with large undeveloped natural resources. Germany, which in late years has been in manufactures and commerce virtually a new country, has experienced highly speculative movements, which the Reichsbank has been seemingly powerless to control. After all, a central bank can do little more than husband its own resources for the future, at a time when the other banks have abun-

dant funds and a spirit of general over-confidence pervades the business community.

It is significant that the exportation of gold or the movement of the foreign exchanges toward the gold export point is the most frequent occasion of an advance in the rate of discount by central banks. Gold exports are not by any means always an indication of an unsound condition of affairs and the approach of a period of financial strain, but in periods of great trade activity and of rapid credit expansion they are commonly an indication that precautionary measures may well be taken. Ordinarily, the foreign exchanges are distinctly more sensitive to an advance in discount rates than the domestic demand for loans. There is a large volume of business of various kinds which can be financed by borrowers in the money markets of more than one country. Bills of exchange accepted by leading banks and bankers arising out of foreign trade or based on securities as collateral furnish the bulk of the material for these international loans. These bills are offered for discount in the market in which the lowest rates can be secured. For an understanding of the somewhat complicated processes of international borrowing some knowledge of foreign exchange operations is required. This is a subject which will be considered in the next chapter. Here it is sufficient to note that an advance in discount rates in any money market tends to induce foreign borrowers to finance their require-

ments more largely either at home or in the money markets of other countries. Foreign creditors also may be induced to employ money in the market in which rates have advanced instead of drawing it home as they might have done if rates had remained stationary.

The foreign trade and financial operations of the leading European countries are of great magnitude, both absolutely and relative to the total business of those countries. Many of the great crises during the nineteenth century were precipitated, and at least in part caused, by events occurring in other parts of the world with which Europe has close financial relations. The purely domestic economic activities of old countries are comparatively stable, and seldom give occasion to inordinate speculation. Any arrangement, therefore, which succeeded both in strengthening the central bank and also in placing a restraining influence upon foreign speculative operations, was one which afforded protection against the most serious weakness threatening the European financial world during the years immediately preceeding the World War.

CHAPTER VII

FOREIGN EXCHANGE

Foreign Exchange is the business which is concerned with buying and selling in one country of rights to the payment of money in other countries either immediately or in the near future. Payments and collections between different parts of single countries, especially those of large area, may give rise to dealings which in some respects are similar to those which appear in the conduct of the foreign exchanges. Thus, in the United States before the development of a system of telegraphic transfer by the Federal Reserve banks domestic exchange rates moved within limits set by the costs of shipping currency between different parts of the country. Charges on currency shipments of $1,000 were taken as the basis for quotations. If, therefore, it cost fifty cents to ship currency between two cities, domestic exchange rates between them ranged from a premium of fifty cents to a discount of a similar amount.

Demand rates of foreign exchange similarly fluctuate between limits set by the costs of shipping, not currency, but gold. Since, for example, it costs in the neighborhood of four dollars to ship

$1,000 in gold between New York and London, four dollars sets the limits to the normal variation in the rate of sight exchange between England and the United States. Quotations might be expressed as in domestic exchange dealings but in practice a different method is used. Changes in foreign exchange rates are quoted in slight fractional or decimal variations from the pars of exchange. Between most countries the par of exchange itself, instead of being quoted in a large monetary unit as in American domestic exchange, is expressed by taking the specie value of the gold or silver coin commonly used as a measure of value in each country in a similar coin in other countries.

Thus, the par of exchange between England and the United States is $4.8665, the exact amount of dollars which can be coined from the gold in the pound sterling. As the cost of shipment of gold between the two countries is in the neighborhood of two cents per pound, exchange rates may normally rise to about $4.88, the gold export point, and fall to about $4.84½, the gold import point.

When exchange is expressed in United States currency, a rising quotation indicates an approach toward the export point. When, however, quotations are expressed in the currency of a foreign country, the opposite is true. A fall in the quotations then indicates an approach to the export point. For example, a payment of one thousand pounds is to be made in London. If exchange is near the export point more will be paid than if it

is near the import point, since at the export point the gold value of the sovereign plus the cost of shipping will be paid. If the rate were $4.88, more would be paid to remit one thousand pounds to London than if the rate were $4.86. But suppose it is desired to pay one thousand dollars in New York. Clearly more pounds must be paid when the rate is $4.86 than when it stands at $4.88.

The expenses incurred in shipping gold determine the export and import points, the gold or specie points as they are commonly designated. The obvious expenses are freight, insurance, commission, and the cost of packing the gold. All these elements of expense are somewhat variable. Freight charges may not be uniform, and it makes a difference as to the kind of gold available for shipment. The most inexpensive form for the purpose is gold in bars. Bars can be packed more handily, are of full weight, and there is less loss from abrasion than in the case of shipments of coin.

Some of the European central banks have a sliding scale of rates for gold, buying bars and foreign coin at coinage value as a maximum price and at that price less the loss of interest during the period required for coinage as a minimum price. In selling gold they impose rates which offset in varying degree the advantage of shipping bars or foreign coin rather than more or less worn domestic coin. By these means the importation of

gold is at times stimulated, or its exportation obstructed, but the influence is slight and temporary. In the long run they have no appreciable influence upon the distribution of the precious metal throughout the world.

Another element of expense in gold shipments is time. If a fast express steamer is sailing the specie points are somewhat nearer par than during a week when only the slower boats are available. It should also be noted that foreign central banks frequently allow immediate credit for gold while in transit. This, of course, brings the import point still nearer the par of exchange. Improvements in means of communication have reduced the normal range of demand exchange fluctuations. Thirty or more years ago the export point from New York to London was above $4.89. It is now normally in the neighborhood of $4.88. The import point was then in the vicinity of $4.83. It is now normally not far below $4.85. But from what has been said it will be seen that the exact point at which it is possible to export or import gold at a profit is subject to much variation even within short periods of time.

The cable transfer rate is always above the demand rate. It gives the purchaser the amount of his purchase immediately, whereas in the case of demand exchange the proceeds will not be placed to his credit until the steamer arrives on the other side six to ten days later. The seller of cable transfers loses interest on the amount of

his sales at once, since his balances in the foreign banks, which uniformly draw interest, are at once reduced. The interest rate on these balances is not, however, constant. There is, therefore, a varying spread between the cable transfer rate and the demand rate. If, for instance, a foreign exchange dealer is getting 1½% upon his balance in London at one time, and at another time is getting 2%, he will naturally charge more for a cable transfer in the second case than he would in the first. There are also special causes of fluctuation in cable transfers. It sometimes happens that many persons defer making necessary remittances in expectation that rates will go down at the last moment. They must meet their engagements on the other side, and the demand at such times for cable transfers may cause the rate to move abnormally far from the demand rate.

A glance at a newspaper will show that in addition to cable transfer and demand rates there are a variety of other rates generally quoted—bankers' bills and various kinds of commercial bills drawn for varying periods of time. Rates for these bills are always lower than demand rates. If the demand rate on London was $4.86, the rate on bankers' 60-day bills might be $4.83, and it might be found that the rate on a certain class of commercial bills was $4.82½ and on another kind $4.82. The quotations on time bills are always less than those for demand exchange by the amount of the varying costs of discounting

them in the foreign country on which they are drawn, and by the stable costs of commissions and stamp taxes. If the rate of discount on a 60-day banker's bill is 3% in London, then the quotation for a bill of that kind in New York will be the sight rate of exchange less the discount and other charges on the bill in London. Should the discount rate in London advance on that particular kind of bill, then the quotation will move somewhat farther away from the sight rate. The reason for the different prices or quotations for the various kinds of time bills is that there is a scale of discount rates in the London market dependent upon the character of the bill, the lowest rate being on bills drawn for acceptance on a London bank or acceptance house.

Bills without documents, known as clean bills, can be marketed by drawers of well-known and established credit, but most foreign trade gives rise to documentary bills of exchange. The seller draws a bill of exchange upon the purchaser, or upon the bank of the purchaser, attaching to the bill various documents, the most important being the bill of lading, without which it is impossible to secure possession of the goods. Documentary bills are of two kinds, documentary for payment and documentary acceptance bills. In the case of documentary payment bills the purchaser of the goods cannot get possession of them until he has paid the bill of exchange. These payment bills, again, may be classified as those drawn against

sales of perishable goods and such other goods as the purchaser is fairly certain to want immediately upon arrival, and those drawn in connection with goods which the purchaser may not want until the bill matures. If the purchaser desires the goods immediately and makes payment, he is allowed a rebate, which, in the case of English bills, is 1% below the current Bank of England rate. Therefore the maximum price of such bills is the sight rate of exchange, less the rebate and the ordinary commission and stamp tax. If the goods are of a kind which are not likely to be wanted by the purchaser until maturity of the bill of exchange, then the dealer purchasing the bill may be obliged to hold it until maturity. It cannot be discounted, because the purchaser of the goods may at any time exercise his right of taking up the bill. The exchange dealer may, however, use such bills as collateral, drawing his own bills upon his foreign correspondent.

Documentary acceptance bills are of two kinds —those which are drawn for acceptance on a merchant, and those which are drawn on a bank or acceptance house. Documentary acceptance bills on merchants are regularly discounted at a slightly higher rate in London, and consequently the price of such a bill in this country will be slightly lower than documentary bills on London banks and bankers. For this reason, to an increasing extent the bank acceptance is displacing the commercial bill in foreign trade throughout

the world. The importer, for example, secures an acceptance credit for some definite amount with a well-known bank in his own or some other country. He then instructs his agent, or those from whom he purchases goods, to draw bills accompanied by shipping documents upon the accepting bank. Similarly the exporter may draw bills on banks in his own or in some other country with which his customers have established acceptance credits.

Until after the beginning of the twentieth century, the United States, like other rapidly developing countries, did not finance any appreciable amount of its foreign trade, either of exports or of imports. Demands for capital within the country were so great that rates for loans were regularly above those in European money centers, London, and to the same extent other European money markets, financed not only the trade between Europe and the rest of the world, but also trade between non-European countries.

Let us take, for example, the case of an importation of wool to the United States from Australia. The most common way of arranging payment has been through the commercial letter of credit on a London bank. Let us suppose that a Boston wool house is about to purchase a cargo of wool. It will secure through some foreign exchange banker in this country an acceptance credit with a London bank. Under the terms of this credit, the agent in Australia of the Boston wool house

will be empowered to draw documentary acceptance bills up to a certain amount on the London bank. Upon the purchase of the wool a bill on the London bank is drawn, and with shipping documents attached is sold to some Australian bank. Thus the funds are provided with which to pay for the wool. The Australian bank sends the bill with the documents to its London correspondent, and at the same time ordinarily will sell an equivalent amount of sight exchange against the funds which it will secure in London through the discount of the documentary bill. No one in Australia has any further connection with this transaction. The correspondent of the Australian bank in London takes the bill with its documents to the London bank on which it is drawn for acceptance. Having been accepted by the London bank, which takes the shipping documents, the bill is discounted in the open market by the London agent of the Australian bank. This provides funds to meet the sight exchange which the Australian bank had sold. The London bank which accepted the bill then sends the documents to this country to the foreign exchange banker through whom the arrangement was made. The wool house cannot get possession of the wool until it can get the bill of lading, and the exchange banker need not give up this document until he is provided with funds to purchase the sight exchange on London necessary to meet the payment of the bill accepted by the London bank. Thus every-

one is secured at each stage in the transaction, in so far as the wool itself may be regarded as security.

To illustrate the financing of exports, we may take the case of a shipment of goods from the United States to South America. The financing may be handled in a number of different ways, but one of them will serve for illustrative purposes. A commission house exporting goods to South America will often be paid in 90-day drafts on some London bank, drawn by the South American purchaser of the goods. If the commission house waits until these bills mature, it will be a long time out of its money—the time that the goods are in transit to South America, the time that is required in sending the bill of exchange to London, and ninety days thereafter. Something like six months will elapse before the maturity of the bill. But the commission house in New York wants its money at once. It may itself, therefore, draw a 90-day bill upon a London bank and get the cash by selling this bill in the New York market. This 90-day bill will be sent to London and discounted in the London market. Thus it will be seen that London really finances the shipment of goods from New York to South America. When the 90-day bill falls due the New York house must provide payment, since the South American bill is not yet due. This it can manage by discounting the South American bill in the London market. Finally, when this bill matures,

means of payment will have been provided by the South American purchaser of the goods. Thus during the period of six months London has financed the transaction; first, by discounting the bill of the New York commission house, and then by discounting the bill drawn by the South American purchaser.

A considerable number of banks throughout the United States have established foreign exchange departments in recent years. They have entered into the necessary arrangements with foreign banks, establishing balances with them, and are thus able to provide their customers directly with cable transfers, sight drafts, and also letters of credit, both travelers' and commercial. A foreign exchange department of this kind does not require any considerable amount of capital. It will purchase time bills of exchange drawn against merchandise shipments, at the rate at which these bills on arrival will be discounted in London or elsewhere. It therefore incurs no risk from fluctuations in foreign rates of discount—fluctuations which the American banker would hardly be in position to forecast. Having purchased time bills at a rate which is less than the demand rate of exchange by the amount of the discount on arrival, stamp tax, and commission, the bills may be at once sent on for discount, and at the same time the foreign exchange department may sell an equivalent amount of demand exchange. Of course, if the foreign exchange

manager cares to assume the risk, he need not sell demand exchange equivalent to his purchases of time bills; but if he is not allowed very much capital to work with, and wishes to avoid practically all risk from fluctuations in exchange rates, it is ordinarily possible to do so.

The many banks scattered all over the country which have foreign exchange departments do not directly have anything to do with the determination of the sight rates of exchange. They are determined by the operations of a comparatively small number of dealers in exchange in New York City. Some of them are private banking firms, and others are the managers of foreign exchange departments of banks and trust companies. These institutions and firms necessarily incur a certain amount of risk in connection with foreign exchange dealings. They buy and sell a more or less indefinitely large amount of sight exchange. If it is believed by one of them that rates are going down, he will be likely to offer a good-sized block of sight exchange, and if another takes the opposite view he will be prepared to buy. Dealings between the large foreign exchange houses are reflected in constant slight variations in demand rates of exchange. Sometimes the exchange market is quiet, but at times it is in a feverish condition.

Those who are engaged in the foreign exchange business in New York must take account of every influence which may increase or diminish the amount of foreign exchange material. What

may be called the foreign exchange material consists in the first place of all sorts of time bills drawn against or resulting from exports and imports of merchandise. All of the commercial bills drawn against cotton shipments, grain, petroleum shipments, etc., build up balances on the other side against which exchange may be sold. Interest payments, shipping charges, tourist expenses, dealings in securities, issues of American securities marketed abroad or resold to this country, all provide foreign exchange material.

In addition to all these exchange creating factors, there are temporary loans made by one foreign market in another foreign market, by means of finance bills. These loans may be made in a variety of different ways. The foreign exchange house in New York enjoying good credit may, for example, draw bills upon a London correspondent payable in three months. These bills, on acceptance by the London correspondent, may be readily discounted, thus giving the American exchange house a balance to the amount of the bills, and enabling it to sell an equivalent amount of sight exchange in New York. This is what ordinarily happens in the case of foreign borrowing. No actual money commonly moves between the two markets. Similarly, borrowing may be arranged by an exchange dealer for one of his clients who may deposit collateral as security. The cost of these transactions is determined by the

discount rate in the country on which the bill is drawn and by the course of the sight exchange rate. Suppose, for example, that the sight rate of exchange is \$4.86, and that a long bill is drawn and sold at \$4.82, a difference reflecting the discount rate in London. When the long bill matures, the borrower must purchase sight exchange with which to take it up. If the sight exchange rate is then still at \$4.86 he will have paid only four cents on each pound for the use of the money during the period. But in the event that the sight rate has gone up to \$4.87 his loan is more costly, as he will be paying five cents for each pound. By the purchase of a future contract for the delivery of exchange at the maturity date of the bills, it is however always possible to settle definitely the cost of these operations.

Foreign short-time loans do not ordinarily occasion movements of money into the borrowing country, but they frequently check gold exports. They are seldom made except when rates for loans are relatively low in the lending market and the rate of exchange is high toward the export point in the borrowing market. Let us suppose, for example, that the rate in New York for three months' collateral loans is 5% and that the discount rate in London is 3%. It may then be advantageous to borrow in London if the sight rate is at least as high as \$4.87. It cannot go much above \$4.88, and it may be at a much lower point three months hence, when it becomes neces-

sary to purchase demand exchange. If the rate does go down, it reduces the cost of the loan to the borrower. If, however, he should enter upon this transaction when the sight exchange rate was $4.85, he would incur the risk of a possible advance to $4.88, making the loan an extremely costly affair.

Whenever there is a large balance of payments against a country, temporary borrowing cannot prevent exchange rates in the long run from moving to the export point. But within limits it is possible to postpone gold movements if interest rates go to a much higher level than those prevailing in the foreign countries to which heavy payments are due. In such circumstances, so long as the credit of the debtor market remains good in foreign countries, very considerable temporary loans may be made, thus providing sight exchange. But if a large number of three-month bills are drawn now, at the end of that period it will be necessary to make payments or secure renewals and renewals cannot be continued indefinitely.

Within moderate limits, borrowing by means of bankers' time bills serves a useful purpose, tending to steady the sight rate of exchange. In the absence of these bills a comparatively slight excess in the demand for or supply of exchange would cause rates to move violently between the export and import points. When drawn for the purpose of steadying the exchanges they are

sometimes spoken of as anticipatory bills. Bankers' bills, for example, were formerly regularly drawn by New York in the early summer months, because it was known that in the autumn a great quantity of commercial bills would come into the market in connection with exports of cotton and grain. Anticipatory bills are in no sense different from other bankers' bills. It is simply that within limits and at certain times they really are anticipatory. The term finance bills is sometimes used in a derogatory sense, as if commercial bills were the only perfectly reputable variety of bills of exchange. Bankers' bills are, however, essential for the smooth working of the exchanges, and the danger that they may be drawn to an excessive extent and contribute to the creation of an unsound situation is not peculiar to this method of borrowing.

From the foregoing discussion it may have been observed that there are two more or less distinct groups of foreign exchange markets—borrowing markets and lending markets. The borrowing markets are numerous, while the lending markets are few, with a strong tendency for a single market to acquire nearly the entire business. In many ways it is advantageous to have one city in the world which serves as a center for international payments. London became the central money market of the world, reaping all the advantages of that position, because it was able to absorb whatever amount of foreign bills might be sent

thither for discount. This is an essential condition for the normal working of the exchanges under a system of settlements largely concentrated in a single market. The market on which bills of exchange are drawn must be prepared to discount them. In order to avoid the risk of loss from fluctuations in exchange, bankers purchasing time bills drawn on another country must be able to discount them at once in that market, so that they may be able to sell demand exchange against the proceeds.

Exchange bankers in New York and in all other exchange markets each day, and oftener if rates change, receive spot and forward delivery quotations from London correspondents. Spot quotations, as the name implies, are discount rates on bills already in London. Forward delivery quotations are the rates at which London bankers and discount houses agree to take bills arriving in the next mail from the market to which they are quoted. These arrival rates enable exchange bankers in New York and elsewhere to purchase time bills without running any risk from changes in London discount rates while the bills are in transit. When downward tendencies in London discount rates seem probable, the banker may not take advantage of the arrival rate; just as in the belief that exchange rates are to advance he may decide to hold the bills to maturity. In fact the advantages and uses of forward delivery quotations are in every way analogous to those arising

from discounting bills which have already been delivered. In one case the arrangement eliminates risk during the transit period, in the other during the entire life of the bill after it reaches the country on which it is drawn.

It is evident therefore that if time bills of exchange are to be handled with a minimum of risk it must always be possible to discount them in the country on which they are drawn. During a long period of years this was possible in London, and at rates which averaged somewhat below those prevailing in other money markets. For this reason and because it facilitates settlements and makes possible a broad exchange market in all countries, foreign bills of exchange throughout the world for many years preceding the European War had been principally drawn on London. In addition to its readiness to absorb the indefinitely large volume of foreign bills, London also exercised most effectively another essential function—that of accepting bills for banks and traders in all parts of the world. Formerly the acceptance business in London was conducted almost entirely by private banking firms known as accepting houses, the value of the London acceptance being due not so much to the financial strength of the acceptors as to the knowledge of the financial standing of banks and traders throughout the world which they had acquired, and the skill and restraint which they had manifested in the conduct of this important branch of the banking

business. Of late years the joint-stock banks have entered this field and in London, as elsewhere, the bulk of the accepting business will probably come to be handled by incorporated banks.

These two indispensable foreign exchange functions were developed during a long period in which peace had become the normal condition of the world. It is, therefore, no more than was to have been expected that with the approach of the European War the entire mechanism of foreign exchanges should be so seriously dislocated as to come almost to a standstill. On Saturday, July 25, 1914, foreign exchange operations were still being conducted in normal fashion throughout the world. Demand exchange in New York was quoted at $4.8830. Gold exports in considerable quantities seemed imminent, but nothing more serious seems to have been expected. Over Sunday the outbreak of a general European war which had been commonly regarded as a vague possibility, became alarmingly probable. On Monday demand exchange opened at $4.92 and the foreign exchange market was completely disorganized. This condition was in no way peculiar to New York. Foreign exchange dealings between all of the money markets of the world were in a similar abnormal state. In no other business was the effect of the approach of the war felt so immediately, generally, and severely. The complicated and delicately balanced mechanism of the foreign exchanges, developed during long years

of peaceful intercourse, collapsed like a house of cards.

Two operations essential for the working of the foreign exchanges had been instantly interrupted and, indeed, practically discontinued, the business of accepting and that of discounting foreign bills of exchange in London. When London ceased to perform these two functions, the mechanism of the foreign exchanges throughout the world inevitably and at once became completely disorganized. Acceptors in London were under heavy obligations on bills of exchange drawn by banks and merchants throughout the world, who in turn were under obligation to remit funds to them before the maturity of the bills. Among these bills accepted in the ordinary course of business were a large number, amounting in the aggregate to many millions of pounds, for banks and merchants in the countries which were rapidly drifting toward war. Remittances could not be expected from hostile countries until after the restoration of peace. It was also certain that remittances would be delayed in many instances in the case of bills accepted for clients in allied and also in neutral countries, owing to the disturbances occasioned by the outbreak of the war. In these circumstances acceptors in London were in no position to make new acceptances, and the value of the acceptance itself was impaired. It should further be noted that exchange banks in New York and in all other markets were under heavy contingent lia-

bilities on account of endorsements of bills drawn on London acceptors. In the event of the failure of London accepting houses, these bankers would have to supply funds to take up the bills and in the disturbed conditions prevailing might incur serious loss through the failure of drawers, to whom they would have recourse. Uncertainty regarding the value of the London acceptance completely transformed the character of the business of buying commercial bills of exchange. A business which normally is highly secure and even routine in character was in a moment changed to one surrounded with uncertainties of a most unfamiliar and incalculable nature. At the same time shipping hazards, and uncertainty as to market conditions in foreign countries, were taking away much of the value of the security which the bill of lading ordinarily gives in the case of bills drawn against exports. Both exporters and those who might purchase their bills would therefore be embarking upon venturesome transactions, utterly lacking the highly developed safeguards which normally protect international dealings, both in commodities and in bills of exchange.

The consequences of the uncertain position in which London acceptors were placed by the approach of the war do not seem to have been at once fully realized even in foreign exchange circles. They were perhaps overshadowed by the presence of another disorganizing influence, the full force of which was immediate and obvious. From

Monday, July 27th, to the middle of August the business of discounting foreign bills in London was almost entirely suspended. With the approach of the war it might well have been presumed that London would decline to quote forward delivery rates before the discounting of bills already in London was discontinued. As it happened, both spot and forward delivery quotations were discontinued at the same time, on Monday, July 27th, striking evidence of the great change for the worse which affairs had taken over Sunday.

This discontinuance of discount quotations by London was the most important single factor in the exchange market in New York and elsewhere throughout the world on Monday, July 27th. It involved a complete transformation, not only of the business of buying commercial bills, but also of conditions in the demand exchange market as well. On Saturday the exchange banker purchasing commercial bills could arrange discount terms at once in London and sell demand exchange against the proceeds. On Monday the purchase of such bills involved the investment of capital until the date of maturity in a far from satisfactory security, owing to the position of London acceptors. On Saturday every commercial bill offered in the market provided the means for an immediate sale of demand exchange. On Monday the immediate supply of demand exchange could no longer be enlarged to the slightest

extent by this means. The principal source of an immediate supply of demand exchange was entirely cut off. Demand exchange could still be sold against foreign balances, but these were not large. The exportation of gold was a further source of supply of demand exchange, but could not go on indefinitely without endangering the foundation of the domestic credit structure. In these circumstances, although exchange transactions were not entirely suspended, there was a complete cessation of certain exchange operations, in the absence of which there can be no broad exchange market. Each dealer made every effort to provide the exchange urgently needed by regular customers, but transactions between dealers were almost altogether discontinued. In normal times, by offering to buy exchange at higher prices, a dealer can secure whatever amount he may require. At such times changes in rates serve to adjust supply and demand in the exchange market. Beginning with Monday, July 27th, rates merely reflected the urgent and even frantic efforts of particular purchasers to secure exchange. Rates fluctuated widely, but as each transaction stood by itself they had no general market significance.

Through the assistance of the British Government, London was able to resume, toward the end of August, 1914, both the accepting and discounting of bills. But a few months later a new cause of difficulty presented itself. Sterling exchange, which throughout the world had ruled far above

par for some time after the outbreak of the war, gradually began to decline, at first slowly, then more rapidly, until it was far below the gold export point from London. By August, 1915, sterling exchange in New York had dropped to $4.50, and fluctuated widely over short periods of time. In other words, the base rate from which rates on all time bills are calculated no longer fluctuated within narrow and definite limits between the export and import points. It consequently became an unsatisfactory medium in which to enter into contracts for payment at a future date. This unsatisfactory position of the sterling rate was due to the enormous importations of supplies to Great Britain on account of the war. Toward the end of 1915 arrangements were finally made for financing these purchases largely through the negotiation of loans in the United States; and thereafter the sterling rate was pegged at about $4.76. The establishment of a stationary base in this artificial manner could not, however, give that confidence in sterling which it enjoyed when subject only to slight changes due to normal trade and credit influences.

The European War, it will thus be seen, created conditions favorable to the development of the business of drawing bills of exchange on other markets than London, and in particular on New York, the most important financial center outside the zone of military activities. Fortunately the power to accept bills of exchange had been granted

to the national banks by the Federal Reserve Act of 1913, and also to state banks and trust companies in a number of the States. Moreover, after the disturbance occasioned by the outbreak of the war had been overcome, discount rates in New York fell to a level distinctly below those in London. Under these abnormal circumstances American bankers entered the foreign exchange field as acceptors and lenders, and speedily acquired a large volume of business which was further developed during the troubled years following the Armistice. Whether American banks will retain and even enlarge the large proportion of world trade financing thus secured is by no means certain. It is advantageous, both to importers and exporters, to have bills drawn on a single central world market, rather than on cities in each of the countries with which they are trading. There has long been a broad market everywhere for sterling bills, because not only trade with England but with all other countries has been handled by means of bills drawn on London. In spite of wide fluctuations in rates between 1919 when sterling was unpegged and 1927 when specie payment was resumed, no large amount of this business, other than that on account of American exporters and importers, was transferred to New York. If an indefinite period of peace seems assured, the supremacy of the London foreign exchange market will presumably persist. It rests upon a favorable geographical position, a greater and more wide-

spread foreign trade and other foreign business relative to purely domestic transactions than that of any other important country, and finally upon discount rates on bills that may be expected to be more stable than those elsewhere, because London financial tradition and practice give a decided preference over all other avenues for the employment of banking funds to the commercial bill of exchange.

A creditor position in the international loan market is of great advantage in periods of financial strain with the possible exception of those occasioned by the outbreak of great wars. The contraction of loans to borrowers entirely dependent on the local banks of a country cannot, as we have already seen, be carried very far without serious disturbances. In the case of foreign loans far more considerable contraction can be carried through without difficulty. Loans of an international character can be placed elsewhere, both by foreign borrowers and those belonging to the country which is seeking to strengthen its position. Moreover, in the event that positive liquidation becomes necessary, since it is spread over a wide area, it will cause far less disturbance than a much smaller amount of liquidation confined to domestic borrowers.

In the preceding chapter it was noted that advances in the rate of discount were the chief reliance of central banks in safeguarding their reserves from depletion. It will now be evident

that this device is by no means equally effective in all countries and circumstances. It is a certain safeguard affording immediate protection from a foreign drain only for those money markets which occupy a creditor position in the international loan market. Such is the constant situation of London, Paris, and Amsterdam. Other markets, occupy sometimes a creditor and at times a debtor position; still other markets, are normally debtors on balance to the rest of the world.

For London it was absolutely certain, at all times during the century preceding the World War that an advance in discount rates if pushed far enough would not only serve to check gold exports, but would also induce gold imports if the rest of the world met its obligations as they matured. Moreover, since the London market was regularly lending in all parts of the world, a large volume of indebtedness in the aggregate could be liquidated without occasioning such a considerable amount of contraction at any one point as to disorganize business and destroy ability to make payments. In these circumstances it has not been necessary for the Bank of England to hold a large reserve of cash in order to give stability and strength to the English credit structure. It was also a comparatively easy matter to maintain in London a free gold market, without exciting apprehensions in the business community, even though at times there might be large quantities of gold taken for export.

The foreign short-time loans of the other creditor markets, such as Paris and Amsterdam, have been less widely distributed than those of London, and consequently the possibilities of contraction have been somewhat less. A somewhat larger gold reserve at the Bank of France than at the Bank of England would, therefore, seem to be necessary to give the same degree of strength to the credit structures of the two countries. In fact the reserve of the Bank of France was many times greater than that of the Bank of England, and no effort was made to establish a free gold market in Paris. French economic and financial activities would not have subjected the country to danger of depletion of its gold supplies, even if no restraint had been placed on gold movements, but the policy of the Bank of France in this matter was determined by other considerations, to which attention will be given in a later chapter. It may, however, be observed that in France, and indeed in most other countries, undue importance has been attached to the outflow of gold with a consequent unwillingness to allow time and opportunity for underlying economic forces to bring back exchange rates from the gold export point to a normal position.

For markets in a debtor position in the international loan market it is necessary to possess a relatively large gold reserve or a supply of funds in foreign markets in order to be able to meet all contingencies. Creditor markets can compel pay-

ment. Debtor markets must rely upon the much less certain resource of being able to retain foreign balances and perhaps attract additional funds from other markets. They must possess sufficient funds to meet foreign payments in case foreign balances are withdrawn. The smaller debtor markets are accustomed to rely, to a considerable extent, upon holdings of foreign bills, especially those drawn on London and since the World War bills drawn on New York as well. Such a resource is, however, inadequate for large countries, such as Germany and the United States. The central banks, in such countries, particularly if free gold markets are to be maintained, must accumulate reserves of gold in normal times and be prepared to supply from these reserves whatever amounts of gold may be needed for export or other purposes in periods of financial strain.

CHAPTER VIII

THE ENGLISH BANKING SYSTEM

THE Bank of England owes its origin to the financial straits to which the government of William and Mary found itself reduced in carrying on the war with Louis the Fourteenth. The revenues of the kingdom were small, the public credit weak, and the very title of the dynasty unsettled. The growing wealth and business of the country had caused private banking houses to spring up. The paper given by these houses to their creditors had acquired a circulation, limited indeed, but sufficient to show its convenience, and projects for the establishment of a public institution on the scale, if not on the model, of the great continental banks had been discussed for many years.[1] Under these circumstances, as an expedient for raising a million sterling, for which no other resource could be found, the government in 1694 adopted the scheme proposed by William Paterson, a Scotch adventurer, and proposed to

[1] These institutions among which the Bank of Amsterdam and the Bank of Venice were the most important, were not banks in the complete modern sense of the term since they were not authorized to make loans.

Parliament that a loan should be offered for public subscription and made attractive by a grant of incorporation, with banking privileges to be enjoyed by the subscribers and their successors. The measure seems to have been contested chiefly, although not wholly, on party grounds, and was passed after a severe struggle, and thus the Bank of England came into existence as a Whig corporation.

The act of 1694 provided for a loan to the government of £1,200,000, bearing interest at eight per cent., and incorporated the subscribers, with this amount of nominal capital, as the Governor and Company of the Bank of England,—a title which has never been changed. The corporation was empowered to deal in coin, bullion, and exchange, and to lend upon security, but was forbidden to deal in merchandise in any form. It could not borrow nor give security by bill, bond, or agreement, for an amount exceeding its capital; no provision was made for the transfer of its bills, "obligatory or of credit," except by indorsement; nor was any monopoly created in its favor. In this form the charter of the Bank gave little promise of its future importance. Three years later, however, the necessities of the government and the embarrassments of the Bank, which had been obliged to suspend payment in 1696, led to a revision of the charter, in which the outlines of the great structure begin to appear. The issue of notes payable to bearer on demand was authorized, thus laying the foundation for a true bank-note

circulation[1]; the monopoly of corporate organization was granted by providing that, during the continuance of the charter, no other bank or corporation in the nature of a bank should be allowed in the kingdom; and, on the other hand, the capital was doubled by a fresh advance from the stockholders to the government, and the interest payable by the latter was reduced to six per cent.

From this point the growth of the Bank and the increase of its influence were rapid. The corporation became the chief depository of the public money, and the agent of the Treasury in many financial operations. In 1720 it carried on a mad struggle with the South Sea Company for the control of the business of refunding the national debt, and managed, although with difficulty, to save its own credit in the crisis which destroyed its rival. Further loans to the government and additions to the capital of the Bank were made in quick succession. In 1722 its capital stood at nearly nine millions, and it was also able to establish from its profits the surplus fund now called "the Rest," and thus to save its dividends from serious fluctuation. In 1782 the capital had risen to more than eleven millions and a half, and in 1816 it had risen to £14,533,000, at which figure

[1] The notes issued under the act of 1694 appear to have borne interest, and, being made to order, could have had but a limited circulation. No notes of less than £20 were issued until in 1759 the Bank began the issue of notes for £15 and £10. Anderson's *Origin of Commerce*, ii., p. 413.

it has stood ever since. Of the loans to the government, which had risen in nearly the same proportion as the capital, one fourth was repaid in 1834, reducing the total to £11,015,100, which is its present amount. By the year 1750 the government had succeeded in reducing the interest on most of its debt to the Bank to three per cent., and it has since used the opportunity afforded by the periodical necessity for a renewal of the charter, to lessen still more the burden of its interest, by requiring from the Bank an annual bonus and other pecuniary concessions, in consideration of the extension of its monopoly.

This monopoly, dating, as has just been said, from the act of 1697, and confirmed by the act of 1707, was further defined by the act of 1742[1] as the right of "exclusive banking," the true intent being, as is declared in the latter year, that

> No other Bank shall be erected, established, or allowed by Parliament, and that it shall not be lawful for any Body Politick or Corporate whatsoever, erected or to be erected, or for any other Persons whatsoever, united or to be united, in Covenants or Partnership, exceeding the number of six Persons, in that Part of *Great Britain* called *England*, to borrow, owe, or take up, any Sum or Sums of Money on their Bills or Notes, payable at Demand, or at any less Time than six Months from the borrowing thereof, during the Continuance of such said Privilege to the said Governor and Company.

[1] 6 *Anne*, ch. 22; 15 *George II.*, ch. 13.

It is clear from this language that Parliament understood by "banking" only the issue of notes, and that the exclusive privilege of the Bank did not prevent the issue of such notes by partnerships having only six partners or less, nor the performance of the other banking functions by companies or partnerships of a greater number of partners. Notes continued to be issued by the London private banking houses, some of which were of longer standing than the Bank of England itself, and by country bankers, of whom the number increased rapidly in the second half of the eighteenth century. The London bankers, it is true, began not far from the year 1772 to discontinue the issue of notes, finding the check system identical in its advantages and more convenient in practice; but their right of issue was merely in abeyance, until it was formally taken away in 1844. The country bankers, however, with many vicissitudes of fortune, continued the issue of notes and finally became subject to the restrictions contained in the Bank Charter Act of 1844, presently to be described.

That the Bank monopoly in its strict interpretation also permitted the exercise of all banking functions, except issue, by joint-stock banks and companies of more than six persons, had indeed been noticed, but seems to have been little considered, until the discussions of 1826, which were renewed upon the revision of the charter in 1833. The growing demands of the country for banking

facilities, and the slowness with which the Bank of England responded to these demands by the establishment of branches, caused much unsound banking by private firms, while a lingering doubt as to the meaning of the monopoly prevented the foundation of joint-stock banks with large capital. Lord Liverpool is reported as declaring in 1826, that the effect of the law "is to permit every description of banking, except that which is solid and secure." The result of this state of things was that, notwithstanding the resistance of the Bank of England, an act was passed in 1826, giving to companies of more than six persons the right of issuing notes, when established at a greater distance than sixty-five miles from London, thus creating an important exception to the monopoly hitherto enjoyed by the Bank. The act of 1833, for renewing the charter, also expressly declared that companies and partnerships, although composed of more than six persons, might carry on the business of banking in London, or within the radius of sixty-five miles, provided they should issue no circulating notes.[1]

This legislation was followed by a great extension of joint-stock banking. The London and Westminster Joint-Stock Bank, still one of the leading banks of deposit in England, was established the next year,[2] and many banks of issue

[1] 7 *George IV.*, ch. 46; 3 and 4 *William IV.*, ch. 98.

[2] The London and Westminster was for many years under the management of James W. Gilbart, author of several works on

began business outside of the geographical limit. The extension, however, was too rapid to be sound; the disturbed condition of business affairs for a large part of the next decade stimulated agitation; and public opinion was disposed to find in a vicious note circulation the cause of the repeated commercial crises. The terms of the act renewing the charter of the Bank of England gave to the government of Sir Robert Peel in 1844 an opportunity, both for revising the organization of the Bank, and for putting an end to the increase of the issues both of the joint-stock banks and of private bankers, and the result was the passage of the measure known as the "Bank Charter Act of 1844," or "Peel's Act," in which are embodied the leading provisions by which the bank note circulation of England and Wales is still regulated. By this act, Parliament undertook to make the notes of the Bank of England secure, and to limit the issue of bank-notes of all other kinds in England and Wales.

To accomplish the first of these objects the act provided for the division of the Bank into two departments, the Issue Department and the Banking Department. The former was charged exclusively with the issue and redemption of notes; the latter was charged with the other functions of banking, including the ordinary business of

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banking, and owes its existence largely to his sagacity. For a short account of its early struggles, see Gilbart, *Principles and Practice of Banking* (ed. of 1873), p. 462.

discount and deposit; and in all dealings with each other the two departments were made as independent as if they belonged to distinct corporations. For all notes issued by it the Issue Department was required to hold either government securities, or coin or bullion; and the amount of securities which it could hold being limited by the original provision to £14,000,000, it followed that for all notes outstanding in excess of that amount it must have an equivalent in the precious metals.[1] As experience had shown that the ordinary uses of the country never failed to require an amount of notes higher than £14,000,000, this provision insured the presence of coin or bullion for the redemption of all notes whose presentation for payment could be deemed morally possible, and made it unnecessary to fix any limit to the issue. The ordinary business of the Issue Department was thus reduced to the automatic function of giving out notes for coin, or coin for notes,[2] to

[1] The act provides that of the coin and bullion held by the Issue Department one fifth may be silver. For the reason for this provision see *Hansard's Debates*, May 20, 1844, p. 1334. The Bank ceased to hold silver for this purpose in September, 1853, but temporarily exchanged $2,000,000 of gold for silver with the Bank of France in 1860. *Economist*, Nov. 24, 1860. The conditions on which silver might again be held were stated by the Bank in 1881. *Conférence Monétaire Internationale*, ii, p. 139.

[2] The Issue Department is also made an intermediary between the public and the Mint, being required to buy all gold bullion offered at 77s. 9d. per standard ounce. The ounce is coined into 77s. 10½d., the difference being the estimated equivalent for a loss of interest, caused by the delay incident to the actual coining at the Mint. Hankey, *On Banking*, p. 98.

whatever extent and from whatever quarter such exchange might be required.

Under this arrangement the Banking Department carries on its business of buying securities and using its credit in the form of deposit accounts, on the same general principles on which any bank of deposit and discount is conducted. It is bound to meet all its demand liabilities in cash, and for this purpose it habitually maintains a reserve, consisting either of specie or of notes issued by the Issue Department, which are convertible into specie; and if, for the convenience of its customers, it finds occasion to pay out a greater amount of notes than it receives in payments made to it, or in deposits, it must procure such notes, as any other bank or any private person must, by taking an equivalent amount of gold to the Issue Department and procuring notes therefor. Indeed, so completely was the Banking Department deprived of all special facilities or privileges in dealing with the Issue Department, that it has often been said that, for all practical purposes, the notes might as well be issued by a public office at Westminster as by a department of the Bank itself.

The second purpose of Peel's Act was accomplished by a series of provisions which prevented any increase of the note issues of joint-stock and private banks, beyond the average at which they stood for the twelve weeks preceding April 27, 1844. No bank not then engaged in the issue of notes was allowed to issue them, and no

bank then existing might carry its issue beyond the limit thus fixed for it. It was provided, further, that if any bank issuing notes at the time when the act was passed should close its business, or become bankrupt, or discontinue its issues by agreement with the Bank of England or otherwise, then the latter might add to the amount of securities held in its Issue Department, or in other words to the amount of notes for which it holds securities and not coin, to the extent of two thirds of the amount of the joint-stock or private bank-notes thus withdrawn from circulation. The act thus plainly looked forward to the ultimate withdrawal of all other notes than those of the Bank of England, and to the filling of the vacant place by the latter, in a certain measure. No new issues being permitted, every change, however brought about, diminished the amount of country bank-notes left in use. The progress towards extinction was slower than was expected. It was chiefly due to the absorption of country banks by banks with offices in London, and the last of these issues finally lapsed in 1920. From time to time the Bank of England added, under the authority of the act, to its own issues covered by securities only, until the limit of £19,750,000 was reached in 1923. It plainly was the policy of this legislation that there should never be a large circulation of bank-notes. The smallest note issued by the Bank, indeed the smallest lawfully issued by any bank since 1829, was for £5, a denomination too large to make its

way far from cities and large towns, and of but limited use even in those places.[1] A large circulation of sovereigns, affording a solid basis of specie in the hands of the people, with a small amount of convertible notes for convenient use in the larger cash transactions, was the ideal condition towards which the uniform current of English law was directed for nearly seventy years. In this matter Scotland with its convenient one-pound note, which has so long been safely issued, presents a striking contrast, and Scotch example has been frequently appealed to by those who have urged the issue of such notes by the Bank of England.

To illustrate more clearly the operation of the act we will take the account of the Bank as it stood September 7, 1844, being the account on which the act first took effect. The situation of the Bank at that date[2] was as follows:

[1] The Bank issued no notes so small as £5 until 1795. Francis, *History of the Bank of England* (Amer. ed.), p. 110. In 1797, after the suspension, it was authorized to issue notes of £1, but withdrew them after the return to specie. It made a temporary issue of them during the crisis at the end of 1825 and in 1826, but these also were withdrawn before 1829, in conformity with an act passed in 1826. The issue of £1 notes by country bankers was forbidden as early as 1777, but was permitted from 1797 to 1829.

[2] In the Bank of England statements, Rest (*i.e.*, the balance of the account) means the net profits on hand; Other Deposits comprise individual deposits and deposits by banks; Seven-day Bills are post-notes, still issued to a small amount; Government Debt is the loan made by the Bank to the government, in order to secure its charter; and Other Securities include loans and advances to customers upon security.

Resources		*Liabilities*	
Government debt	£11.m'ns	Capital . .	£14.6 m'ns
"	17.6"	Rest . . .	3.6 "
Other securities . .	7.8"	Public deposits	3.6 "
Coin and bullion .	15.2"	Other " .	8.6 "
		Seven-day bills	1.
		Notes . . .	20.2
	£51.6		£51.6

As no attempt was made by law to protect by preference any special class of liabilities, before the passage of Peel's Act, it follows that the resources set down in this statement were held equally for notes and deposits; and it is at least conceivable that there might be so strong a demand for coin by depositors or note-holders, or both, as to exhaust the reserve, while a large issue of notes was still outstanding, in which case payment of the notes must be suspended. Thus in the extreme panic of December, 1825, the coin and bullion of the Bank was reduced to £1,027,000 and suspension was imminent, while notes were still outstanding to the amount of £23,359,840. Such a possibility became still more serious after the act of 1833 declared that the notes of the Bank, so long as they continued to be redeemed on presentation, should be a legal tender in England and Wales in all payments except those at the Bank itself. It was, therefore, an important object, in separating the departments, to insure the payment of the notes in any event by pledging for that purpose a sufficient amount of securities and of specie.[1]

[1] Whether in case of the insolvency of the Bank the securities

How this result was accomplished is easily seen in the form of statement of the Bank account, adopted upon the passage of the act, and ever since adhered to:

ISSUE DEPARTMENT

Government debt	£11. m'ns	Notes . . .	£20.2 m'ns
Other government securities . .	3. "		
Coin and bullion	6.2 "		
	£20.2 "		£20.2 "

BANKING DEPARTMENT

Government securities . .	£14.6 m'ns	Capital . .	£14.6 m'ns
		Rest . .	3.6 "
Other securities	7.8 "	Public deposits .	3.6 "
Notes[1] . .		Other " .	8.6 "
Coin and bullion	9. "	Seven-day bills .	1. "
	£31.4 "		£31.4 "

The thoroughness of the provision here made for the security of the bank-note is attested by the

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and specie in the Issue Department would be held for the preferred claim of the notes, or would become a part of the general assets, to be divided among all the creditors, is not explicitly declared by the act and has been doubted. But it has no doubt been the common understanding, from the first, that the devotion of the resources of the Issue Department to the payment of its notes is indefeasible. See *Parliamentary Documents*, 1857–58, v., p. 427.

[1] The above shows the effect of the separation of accounts taken by itself. For convenience the Banking Department also transferred 8.2 millions of coin and bullion to the Issue Department and received notes therefor, so that in the published accounts the banking reserve was 8.2 millions of notes and .8 million of coin, and both the notes and the coin and bullion in the account of the Issue Department were raised by 8.2 millions.

fact, that since the passage of the act there has never been a moment when the convertibility of the note has been open to doubt. The lowest point to which the notes in actual circulation outside of the Bank have ever been reduced was a little below £17,000,000 in December, 1848, and this left in the vaults of the Issue Department nearly £14,000,000 in specie, with no demand for it on the part of the public. Indeed, the Bank of England note, under the act of 1844, has become little more than a warrant or gold certificate entitling the holder to so much gold actually lying in the Bank vaults, and thus the whole question as to the solvency of the paper currency has been removed from the field of debate, where it had been agitated for so many years. The Issue Department gains nothing from an increase of the circulation, and can lose nothing by its diminution. The whole problem as to the bank-note is reduced to a mere inquiry as to the preference of the public for coin or for a certificate calling for coin.

It is evident also that to the Banking Department it is of no consequence, except as regards convenience, whether it uses notes or gold in its business. If it prefers gold it has only to send in for redemption such notes as it holds or receives in the course of its business; if it prefers notes it has only to send in its gold for exchange. Its reserve is in fact composed like that of any other bank, of gold or of notes which are good for gold,

or of both; and this reserve it must procure, must maintain, and in case of need must replenish, as any other bank must, by properly adjusting its purchases of securities.

Complete as is the separation between the departments in theory, and generally even in fact, it has nevertheless happened several times, under the exceptional conditions of a financial crisis, that the embarrassments of the Banking Department have affected the issue of notes, in a manner not originally contemplated by the framers of the act. On four occasions it was found necessary to disregard that provision which limits the securities held by the Issue Department, and more than once besides this extreme measure has been escaped with difficulty.[1] In order to understand the real significance of these occurrences, it is necessary to take into consideration the circumstances under which the Bank of England holds its banking reserve.

The most striking fact in the situation of the Bank of England is that the Bank is the center of a great system of banks, whose aggregate business and liabilities are many times greater than its own, and that to this system of banks are confided the financial affairs of the city which may

[1] The limiting clause of the act of 1844 was disregarded, or, as is commonly said, "suspended," October 25, 1847, November 12, 1857, May 12, 1866, and July 31, 1914. In February, 1861, and in May and September, 1864, the condition of things was critical; and in November, 1873, the suspension of the act appeared for some days not improbable.

almost be said to be the Clearing House of the world. It is at all events true that many of the largest trades in the world make their settlement in London, and that especially the world's supply of gold there finds its natural point of distribution. From this it would follow, even if England were not herself a great lender of capital, that many of the operations of lending and paying undertaken in other countries must be carried on through London. The banks through which a cosmopolitan business of this kind passes must at times find themselves subject to great and sudden demands. The nature of their liabilities is not constant; it varies with every change in the condition of any foreign country of importance, and is at one time steady, and at another time uncertain. The reserves, therefore, which are at one time adequate for the protection of these liabilities, are at another time too small. These reserves, however, which belong to the individual members of the great system of banks, are in practice not held by the banks themselves. The London banks, from long habit, keep their chief reserves as private persons might, deposited in the Bank of England, retaining in their own hands only such small amounts as are needed for the demands of the moment, and drawing upon the Bank for more important sums. Of the "other deposits" of the Bank of England a large part represents the liability of the Bank to its neighbors incurred in this manner.[1]

[1] In 1877, when the bankers' deposits in the Bank of Eng-

The position of the Bank of England, then, is not simply that of a bank whose deposits are liable to sudden fluctuations of a peculiar nature; it is also a position of great responsibility. The Bank holds in its charge that on which the solvency of the banks in general, the safety of the commercial public, and the credit of England alike depend. As regards the issue of notes its duties are too plain and even mechanical to throw upon it any serious burden of this kind, but as the depository of the other banks it is in effect charged with the duty of providing in large measure for the safety of all.

As the Bank of England was the first of the institutions now commonly known as central banks, it is not surprising that the responsibilities of its position as they gradually developed and the appropriate measures to be taken in the performance of its special functions only became clearly understood after long and trying experience. Slowly and even reluctantly its management came to perceive that the Bank could not be conducted simply as a bank for the maximum profit of its

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land were reported on, their maximum and minimum points were in January and May respectively, the deposit accounts standing as follows:

	January 10.	*May 10.*
Exchequer deposits . .	£ 1.2 millions.	£ 4.4 millions.
Bankers' " . .	13.3 "	8. "
All other " . .	18.3 "	15.9 "
Total . .	£32.8 "	£28.3 "

For this report see *Parliamentary Documents*, 1878, xlvi.

shareholders, an attitude that inevitably worked against the maintenance of a sufficiently strong reserve of cash and lending power to meet effectively periods of severe financial strain. There were repeated instances when the Bank deferred too long the diminution of its business by the raising of its rate, and consequently found itself in a weak condition at the very moment when it most needed to be strong.

In a succession of cases of remarkable pressure which occurred after the separation of the two departments, and in most of those which happened before, the real difficulty presented will be found to have been that of meeting liabilities for deposits with a reserve which had become insufficient, either from continued negligence in the past, or from the sudden appearance of demands on a great scale. Of these cases we will take as an illustration of the present topic, the critical situation of the Bank in the great commercial panic of November, 1857, a case which may fairly be regarded as typical.

There is no doubt that in England the materials for a crisis had been long in preparation. Rapid commercial expansion and a great extension of credit had brought the usual results in the form of unsound business, of speculative prices, and of extreme sensitiveness to any threatening influence. If no unusual pressure had occurred all might have passed off in a mere subsidence of activity and in general depression; but the sudden

occurrence of a disastrous revulsion in the United States, bringing ruin to some and carrying apprehension to all, developed a crisis which took the whole community of Great Britain by surprise. In August the state of things was reported to be "not unsatisfactory," and no fear seems to have been felt until the middle of September, when heavy failures in New York, beginning with that of the Ohio Life Insurance and Trust Company on the 24th of August, became known in London. Still, although gold began to leave England for the continent, and the pressure in New York had caused the cessation of specie exports to England, the directors of the Bank of England seem not to have thought the difficulty serious. It was not until October 8th, when the news of the general suspension of payments in Philadelphia and Baltimore proved that something more than an ordinary embarrassment existed, that they determined to raise their rate of discount, from the point at which it had stood since July 16th, to six per cent. At this point the condition of the Bank was disquieting. In the course of three weeks it had materially increased its loans, but was losing seriously from its reserve, so that the proportion of reserve to liabilities had changed much for the worse, at a time when general uneasiness was beginning to make the commercial public more than ever anxious to borrow, as a prudent provision for the uncertainties of the immediate future. It may fairly be said then, we believe, that a singu-

lar tardiness of action on the part of the Bank was the immediate cause of much that ensued.

Without following the steps by which the crisis from this point was converted into panic, we will take the state of things existing in the early days of November, when the Bank rate stood at eight per cent. At this juncture, the alarm caused by the failure of several large firms and of one or two provincial banks of some importance had intensified the demand for loans, both upon the Bank of England and the other banks in the city. The increasing disposition of the latter to strengthen their own position, in view of the possible heavy demands to which their great liabilities exposed them, not only threw much of the increased pressure for loans upon the Bank of England, but also led to a marked increase in the bankers' balances—that is, in the deposits of reserve by other banks. At the same time with this serious change in the amount and character of the liabilities, the cash resources of the Bank were falling. An active export of specie to the United States had taken a considerable amount from the reserve, the rise of rates on the continent of Europe had made it impossible to draw specie from that quarter, and the apprehension of banks in the interior led to a serious absorption of cash by them. In short, at a time when it was called upon to extend its use of its own credit, the Bank found itself acted upon by what has been called an internal drain as well as an external one.

The Bank met this dilemma by raising its rate of discount on the 5th to nine per cent., in the hope of repelling the least necessitous borrowers, and by making in the course of the next week an increase of loans to the amount of three millions and a half. Before the end of the week, however, the state of affairs had become desperate. The general alarm had deepened with the rapid succession of failures in the commercial world and the suspension of the great Western Bank of Scotland, and the moderate increase of loans by the Bank of England had done nothing toward quieting the public. Some sales of securities had been effected by the Bank, but the drain upon its reserve as well as the increasing liability for bankers' deposits continued. The rate of discount was raised on the 9th to ten per cent. but without avail. The joint-stock banks and private bankers had finally ceased discounting, so that from Monday, the 9th, the whole demand for loans was thrown upon the Bank of England, whose reserve by the 11th had fallen to little more than one tenth of its "other deposits." On that day came the suspension of the City of Glasgow Bank, caused by the general alarm created by the failure of the Western Bank; other banks called for assistance; and a great discounting firm in the city failed on the same day. In four days, beginning with the 9th, the Bank advanced to the public over five millions sterling, but without the effect of subduing the panic or stopping the drain of its reserve. On the evening of

the 12th it found itself with a liability for deposits amounting to thirteen millions, and a reserve of cash in its Banking Department of only £581,000,[1] an amount which more than one depositor could exhaust by his single check. This feeble reserve might be expected to disappear before the close of the next day.

In all this there had been nothing resembling a run upon the Issue Department. Gold required for export or for the interior was indeed drawn ultimately from that department, for it was provided by those who were directly or indirectly creditors of the Banking Department, who drew therefore from the banking reserve and thus caused notes held in that reserve to be presented to the Issue Department for redemption. But the gold was not obtained by the presentation of notes hitherto in circulation or held outside of the Bank, for from the 10th of October to the 11th of November, the amount of notes thus in the hands of the public is shown by the account to have been almost without change. What had occurred was that the Banking Department had been caught, at the beginning of a severe pressure, with an insufficient banking reserve and had been slow in taking measures for escape. The position of the Bank was such as that of the London and Westminster Bank might have been, had its reserve of cash run down while

[1] Of this only £384,000 was in London, the remainder being held by the branches of the Bank. See *Parliamentary Documents*, 1857–58, v., p. 55.

its liability was large, except that the latter had no chain of dependent banks. It was a case of near approach of failure, as simple in its essentials as that of any private banker who is unable to meet his depositors, or any incorporated bank which is not a bank of issue and meets with similar misfortune.

Thus the Bank, on the 12th of November, reached the end of its tether. Following the precedent of the year 1847, therefore, the management informed the government of the critical condition in which they stood, and received in return a virtual authority for the issue by the Issue Department of a further amount of notes secured by government securities.[1] Thus empowered, the Banking Department transferred to the Issue Department securities to the amount of two millions, and in exchange therefor received notes which were placed in the reserve. The operation was in effect a sale of securities to the Issue Department, in default of other purchasers, and the receipt of payment in notes, redeemable

[1] This practical setting aside of an act of Parliament was in the form of an assurance that, if the Bank found it necessary to take the step proposed, the ministry would ask Parliament to indemnify the Governor and Company for any consequences of such illegal action. Besides the publication of the entire correspondence in the Parliamentary documents, which has been made on every occasion of the suspension of the Bank Act, the "government letter" is given by the *Economist* of November 14, 1857, and all the correspondence for 1866 in the *Annual Register* of that year, p. 305.

on presentation. The effect on the Issue Department was to increase the absolute amount as well as the proportion of notes issued by it upon securities instead of coin or bullion, but the notes did not cease to be redeemed in the regular course of business. Carried to a great extent the operation might plainly have weakened the notes by endangering their convertibility. Restricted as it was, however, it cannot be said to have had any real influence on the credit of the note issue. It gave to the Banking Department an immediate accession of means to the amount of two millions, with the assurance that more could be had if needed, the only discernible limit to the relief being the conceivable inability of the Issue Department to continue the redemption of an indefinitely enlarged issue of notes—a theoretical limit too distant to have any practical bearing.[1]

The real assistance given to the Banking Department, however, did not consist so much in the actual addition of cash to its resources, as in the quieting effect of the measure on the public mind. In every such state of affairs it is a factor of prime consequence that much of the public excitement is pure panic,—an unreasoning terror, which multiplies danger by destroying presence of mind. For the easy movement of business under the credit system, confidence in each other and in the future is necessary. The producer or mer-

[1] This whole subject was reported upon, with evidence, by a select committee, in *Parliamentary Documents*, 1857–58, vol. v.

chant, using borrowed capital, relies upon the sale of goods and upon fresh loans for the means of repaying former advances, and if the current is interrupted, if doubt on the part of buyers prevents sales, or embarrassment of lenders prevents or diminishes loans, the fears of debtors to whom the failure to make their payments punctually means bankruptcy and ruin, become at times ungovernable. No man is any longer sure of anything except his own indebtedness and its near maturity; there is a universal pressure to borrow, even beyond the real needs of the moment, lest borrowing should presently become impossible; and there is a universal tightening of the grasp on all ready means by such as are so fortunate as to have them. The *sauve qui peut* of merchants, who are desperate as to their means of payment, is as mutually destructive and as fatal to their hopes of escape, as is the crush of a panic-stricken audience, blocking the exit from a burning building. To a community thus dominated by universal terror, the Bank of England was able to say that its potential reserve was now so enlarged as to fix no limit to its ability to extend its loans and meet all consequent liabilities. The effect of this assurance in allaying the panic was instantaneous. Men ceased to press for what might not be needed after all, and the other banks in the city, no longer dreading demands from their own depositors, resumed their operations. Confidence had indeed suffered too severe a shock to recover without that

process of liquidation which is called a revulsion of business; but the liquidation, instead of being immediate, could now be gradual enough to enable debtors to collect and realize upon their resources with some deliberation.

It was not then so much the four millions which the Bank felt safe in adding to its securities in a week after the suspension of the act of 1844, as the moral relief given to the public, which constituted the real remedy by which the crisis was ended. As for the change in the amount of the note issues of the Bank, we may fairly deny that in itself it had any influence whatever, so trifling was its amount. The notes issued in excess of the statutory limit, and actually in the hands of the public, stood at their highest point on the 20th of November, when they amounted to £928,000, and by the end of the month the Issue Department had returned to its normal condition.[1] Indeed the difference between the minimum and maximum of the outstanding notes for the month was only £1,300,000.

The conditions on which this singular abandonment of the terms of the Bank charter was allowed were jealously guarded. The Bank has been

[1] This opinion, that the relief given by the suspension of the limit fixed by the act is a moral relief and is not to be found in the actual issue of notes, is confirmed by the fact that neither in October, 1847, nor in May, 1866, was the issue of notes upon securities increased at all,—the mere announcement that such issue would be made, if needed for the reserve, being sufficient to quell the panic.

required to pay over to the government all profits made by it from any increase of issues above the statutory limit,[1] and both in 1857 and 1866 it was required to maintain its rate of discount at ten per cent., so long as it should use the permission given to it. As this rate would drive away business from the Bank as soon as the rate in the general market should fall, this condition insures as speedy a return to the legal limit of the issue as is practicable.

Whatever the conditions, however, the repeated resort to this extra-legal measure was a remarkable departure from an elaborate scheme of legislation in favor of a crude expedient, and does not easily find its parallel, even in English administration. And the question was raised, with good reason, as to the real value of a legal limit, which everybody believes will be set aside when it begins to press. No such mistakes of management could now occur as marked the whole course of the history of the Bank in the first half of the last century. The Bank was not quick to learn the real risks of its position and its responsibilities; but still it has learned them, and now guards its reserve with vigilance, by appropriate means, and with general success. It takes the alarm sooner than formerly, it sets its customary line of supposed safety higher, and thus in the great crisis of 1873, it escaped the disaster which befell it in

[1] The profit on the increase of issues above the limit in 1857 was calculated on £2,000,000, for 41 days at the rate of two per cent. —*Parliamentary Documents*, 1857–58, xxxiii., 271, 275.

1857 in a condition of affairs not more dangerous. Upon the outbreak of the European War in 1914 the act was again suspended by an Order-in-Council. On this occasion there was a small excess issue for a period of only five days, pending the preparation of currency notes issued by the government. At the same time, legal authority for the suspension of the restriction on note issue in future emergencies was granted by Parliament in August, 1914.

From what has been said, it will be seen that the Bank of England, although a highly privileged establishment, is not a government institution. It has a monopoly of the right of issuing notes, and these notes are legal tender in the United Kingdom; it is the chief depository of a government which maintains no public treasury; it is charged with the duty of keeping the registry of the public debt, and of paying the interest thereon; still it is a private corporation of the familiar type, managed by its own officers, in whose selection the government has no share, and whose responsibility is to their own stockholders alone. The Bank has duties thrown upon it, partly by law and partly by force of circumstances, which make it a highly important member of the body politic, and yet it is in form a corporation intended to earn dividends for the owners of its stock. For many years after its foundation it was even forbidden by law to lend to the government, beyond a certain narrow limit, without the express sanction of

Parliament,[1] and although it has now for a long time been a trusted agent, and has at times compromised its own safety by its financial support of the Exchequer, it has never failed in its dealings with the authorities to assert its own essential independence.

The Bank is governed by twenty-four directors, who, by long established custom, must not be bankers, and by a governor and deputy governor. The directors are elected annually, and by usage a part of the board is changed every year; but the changes take place among the younger members, so that after some years of possibly intermittent service, the director's tenure of his position is practically for life. After many years he usually becomes deputy governor for two years in due rotation, and then governor for the like term, (but for a longer term in periods of exceptional difficulty) after which and for the remainder of his official life he is a member of an executive council of directors known as the committee of treasury. The director enters upon office, therefore, at an early age, and reaches the positions of most active responsibility only after a long training in the Bank itself. Such an organization would hardly be proposed if the case were new, but it is, no doubt, well fitted, to preserve the traditions of policy and of management which secure the Bank from rapid change.[2]

[1] This prohibition continued until the year 1793.

[2] On the government of the Bank, see Bagehot, *Lombard Street*, ch. viii.

The peculiarities of this position, which sometimes lead to an erroneous classification of the Bank of England as a government bank, have been much emphasized by the manner in which the other constituents of the English banking system have developed in recent years. The private banking houses have steadily declined in number. The advantages of joint-stock organization and limited liability have led in many cases to their absorption or conversion into companies of larger capital, and have hindered the opening of new private banks, even if establishments of such a decaying type could any longer command the credit once given to them in the English financial world. On the other hand, the joint-stock and limited companies have grown rapidly in the last two generations, both in relative and in absolute importance.[1] They have felt the strong modern tendency to concentration and by consolidations have greatly diminished their number, but with a vast increase, not only of individual, but of aggregate importance. At the same time, by the establishment of branches they have everywhere brought themselves into close contact with the general commercial life of the country, so that

[1] In May, 1890, there were 104 joint-stock banks in England and Wales, with nearly two thousand branches. In May, 1929, there were only 16 joint-stock banks, but with more than nine thousand branches, and the five largest of these banks held nearly ninety per cent of the resources of all of the banks. For English banking statistics generally, see the Banking Supplement published by the *Economist* simi-annually in May and October.

most of the banking of English trade and commerce is now carried on by their agency.

The Bank of England, on the other hand, having established eleven branches before the year 1830, has gone no farther in that direction.[1] It enters into little competition with its younger neighbors for the business which is offered by the growing industry and wealth of the nation, but is satisfied with the scope which its position as the head of the banking hierarchy affords for employing its capital and the energies of its managers. Its long-existing prestige and prescriptive leadership have enabled it to maintain relations and acquire an influence whose importance is not measured by the magnitude of its banking operations. This influence, it must be added, is due only indirectly and in a small degree to any connection between the Bank and the government. The fact that the Bank is the depository of the public moneys and performs for a consideration some other public functions, does not give it in any special way the protection or support of the government, nor place it in any way under the control or direction of any public officer. Its present position and power over the London money market is a development from a long train of causes which have finally imposed upon the Bank some of the responsibilities of a public institution. It is only by degrees and reluctantly that its management have been led to recognize the fact that the Bank is under

[1] The location of its branches has undergone some changes.

obligations essentially different in kind and in range from those resting upon any of its neighbors.

Perhaps the most striking illustration of an extra legal obligation recognized and acted upon by the Bank is the action taken by it in the emergency created by the suspension of the great firm of Baring Brothers & Co. in November, 1890. The Bank then undertook, with great judgment and energy, to save the public from a possibly disastrous panic. To do this, it not only strengthened its reserve by borrowing £3,000,000 from the Bank of France and £1,600,000 from the Russian government, but it undertook, with the aid of other banks and bankers, to guarantee the payment at maturity of all obligations of the failing house, and to look for repayment to the gradual collection of its assets. To this guarantee the Bank was the largest subscriber, the directors agreeing to risk £1,000,000 in the liquidation of an indebtedness of £21,000,000, and the marketing of a corresponding mass of assets, a considerable part of which were supposed to be of uncertain value.[1] It is true that this risk, assumed by the Bank in order to quiet public apprehension, was to be weighed against the loss which might fall upon it if a general panic were to break out and run its course of ruin. Still, it was the general opinion at the time that the directors deliberately set at risk a substantial part of the property of their stock-

[1] Two or three of the large joint-stock banks subscribed £750,000 each. The total guarantee was £17,250,000.

holders in a manner required neither by any legal obligation nor by a calculation of probable advantage, and their right to deal in this manner with the interests entrusted to their care was questioned by some writers. By a natural although illogical process, the success of the operation disarmed criticism,[1] objection died away, and thus a precedent was established which in any future case of the same kind the Bank would find it hard to set aside.

During the World War and for the better part of a decade thereafter, banking in England as elsewhere was conducted under conditions in many fundamental respects unlike those which had determined the volume and uses of credit in the preceding years of peaceful development. Upon the outbreak of the war specie payments were at once suspended in all the belligerent countries, thereby removing the restraining influence upon the supply of bank credit that is exerted when definite legal or customary gold reserve ratios are maintained. And the demand for bank credit speedily assumed unexampled proportions since the financial requirements of the warring governments were by no means fully covered by taxation and by current savings invested in the successive issues of war loans. Bank credit, created to make payment for bonds taken

[1] The liquidation was finally closed in January, 1895, with a balance of more than half a million pounds in securities to be returned to the firm.

by the banks themselves or by loans to other subscribers, in the main provided the additional funds that were required

In England, reflecting the widespread use of checks, the expansion of credit was predominantly in the form of deposits. Other deposits of the Bank of England, consisting largely of the reserve balances of the other banks, increased from less than £50,000,000 in July, 1914, to more than £200,000,000 in July, 1919, and the deposits of the joint stock banks were enlarged from about £800,000,000 to nearly £1,900,000,000. This abnormal increase in deposit credit with its accompaniment of rising commodity prices, wages and many other money incomes necessarily involved an approximately coincident demand for additional currency, a demand that under the rigid British system of issue could only be met with coin or its practical equivalent—Bank of England notes. The requirements of the situation were in fact met, not by a modification of the restrictions to which the Bank was subject, but by the issue of government paper money—currency notes in denominations of one pound and ten shillings. There was indeed a large increase in the amount of Bank of England notes in circulation, but this increase was fully covered by the lodgement of additional gold in the Issue Department, the gold itself being mainly a portion of that secured through the substitution of currency notes for coin previously in circulation.

The so-called fiduciary issue of these currency notes—the total outstanding less coin and Bank of England notes held as a reserve—increased rapidly during the war and the period of active trade following its close, reaching a maximum of about £320,000,000 at the end of 1919, something like twice the amount of coin in circulation before 1914. As an incident of the business depression of the succeeding years, the demand for currency slackened, and the maximum issue for 1923 was below £250,000,000. During the next four years fluctuations were within narrow limits, furnishing evidence that the issue was not in excess of the permanent requirements of the country at the prevailing level of prices. Specie payments were resumed in May, 1925, England being the one European belligerent to restore its currency to its pre-war value. In order to economize gold, a reversion to the employment of coin in making payments was prevented by a novel device subsequently adopted by other countries on returning to a gold basis. Payment in gold was made obligatory only in gold bars or bullion and in amounts not less than 400 ounces, equivalent to about $8,000. This limitation, it is important to note, does not in the slightest degree lessen the effectiveness of the gold standard as a means of firmly linking the currency of the country with those of other countries that are upon a gold basis.

Finally, in November, 1928, the currency notes were converted into an obligation of the Bank of

England by a process closely analogous to that which followed the relinquishment of the note issues of the joint stock and private banks, with the important difference that in this instance the Bank was to issue its own notes to the full amount of the fiduciary issue of currency notes. The amount of notes covered otherwise than by gold, designated the fiduciary issue, was increased from £19,750,000 to £260,000,000, and at the same time the Bank was empowered to issue notes in denominations of one pound and ten shillings. The change thus accomplished has more of monetary than of banking significance. These provisions of the Act of 1928 make permanent the substitution of notes for coin for small payments, but they do not essentially alter the conditions under which the volume of the circulating medium might be increased in the future. More important as a banking matter therefore was a provision of the Act which introduces a slight measure of elasticity. With the consent of the Treasury, and for a succession of six months periods not exceeding two years, the Bank is empowered to issue additional notes covered by securities. Emergency requirements for currency, formerly met by the suspension of the Act of 1844, are thus given statutory recognition, but at the same time something more is involved. It was recognized that there may be permanent need for additional currency in the future, and the two year period before further parliamentary action becomes neces-

sary presumably affords sufficient time to test the situation and to take considered action.

The conversion of the currency notes into an obligation of the Bank of England was marked by the appearance of the weekly statement of the Bank in a revised form giving additional information to the public. By far the most significant disclosure thus made was the differentiation of Other Deposits into bankers' balances and other accounts. Comparison of the Statement for November 28, 1928, with that on page 151 will show the other changes that were made at this time.

It is to be noted that cover for the fiduciary issue of notes includes securities other than government securities, and also silver coin, the amount of which is limited by the Act of 1928 to £5,500,000.

BANK OF ENGLAND RETURN

FOR THE WEEK ENDED NOVEMBER 28, 1928

ISSUE DEPARTMENT

Notes issued:		Govt. debt.......	£ 11,015,100
In circulation	£367,001,148	Other Govt. securities......	233,568,550
In Banking Dept.......	52,087,797	Other securities..	10,176,193
		Silver coin.......	5,240,157
		Amount of Fiduciary issue..	260,000,000
		Gold, coin and bullion........	159,088,945
	£419,088,945		£419,088,945

BANKING DEPARTMENT

Proprietors' capital	£ 14,553,000	Government securities	£ 52,180,327
Rest	3,254,001	Other securities:	
Public deposits	21,452,051	Discounts and advances £13,586,293	
Other deposits:		Securities £20,214,855	
Bankers £62,379,409			33,801,148
Other accts. £37,185,203	99,564,612	Notes	52,087,797
Seven-day and other bills	2,649	Gold and silver coin	757,041
	£138,826,313		£138,826,313

These modified currency arrangements may be expected to meet a structural defect in the English banking system which made itself manifest only at infrequent intervals in the past. In the everyday operation of the system, however, the presence of conditions affecting the position and functioning of the London money market for which the war and its sequel are chiefly responsible has far greater significance. Before the war, London was the center of a system of world-wide financial relationships, characterized by a close approach to an equilibrium of payments between each country and the rest of the world. Constant slight commercial and financial readjustments were ordinarily sufficient to maintain the position. Gold movements exerted a double influence, inducing credit restraint in the exporting countries and an easier money market in the countries to which the gold was sent. London

was the pivotal point in this continuous process of adjustment, and was admirably fitted for the task thanks to the diversified character of British trade and foreign investments, and because the demand for capital and credit for purely domestic purposes in Great Britain was marked by a high degree of stability.

This situation of nicely balanced equilibrium and the central agency for its maintenance were profoundly affected by the World War. International obligations of unprecedented magnitude, both between governments and on private account, were incurred, and these obligations may be expected from time to time to require large gold movements and price adjustments if payments are to be maintained. On the other hand, countries receiving large amounts of gold become subject to the danger of serious credit inflation if the gold is fully utilized, while failure to do so imposes the entire burden of necessary adjustments upon the debtor countries. In these circumstances, less reliance than formerly can be placed upon the effectiveness of gold movements as a means of regaining financial stability or of restraining credit expansion.

It is also to be noted that the war has brought about a larger participation in the international functions of the London market by other money markets, notably Paris and New York, markets whose operations are far less free from the disturbing effects of purely local influences and limitations.

London discount rates have lost much of their pre-war potency, and the course of the foreign exchanges has become subject to the influence of the greater variety of conditions and diversity of credit policies of the additional markets that have come to occupy a strong creditor position.

CHAPTER IX

THE FRENCH BANKING SYSTEM

FROM 1793 to the latter part of 1796, banking can hardly be said to have existed in France. The government tolerated no issue of paper except its own; the Caisse d'Escompte, which for many years before had been the only public bank, had been suppressed, and the times were too disturbed for private banking to flourish. With the disappearance from circulation of the *assignats*, and of their successors, the *mandats territoriaux*, the issue of notes appears to have become a matter of common right, to be undertaken by anybody who could gain the confidence of the public; and accordingly a bank of issue called the Caisse des Comptes Courants was organized in Paris in the last half of 1796, and began its operations with fair success. Two others of some importance were established by the year 1800, besides some smaller ones of which little is now known; and in Rouen a bank of discount and issue was in active business as early as 1798. It is clear that, with the return of orderly government and the revival of credit, the need of banks began to press.

Under these circumstances the Bank of France was also established in Paris in 1800, with the encouragement of the government and even with the First Consul as one of its stockholders, but still upon a footing not essentially different from that of its neighbors. Its capital of 30,000,000 francs was the largest yet proposed, and the difficulty for raising it led to a fusion with the Caisse des Comptes Courants, but no monopoly was created. One public bureau, holding a large amount of funds, was required to invest them in shares of the new bank, and large deposits were made in it by the government; still, although favored, the Bank of France stood legally upon an equality with the rest and nothing more. So far it might be said that the field was open in France for a wide and free diffusion of banking facilities, and that by the new establishment the government pointed out the way for its citizens.

In 1803, however, Napoleon announced a complete change of policy, and the Bank of France was endowed with the exclusive privilege of issue in Paris[1] until September 24, 1818, and its capital was raised to 45,000,000 francs. All other issues of notes were at once withdrawn, one of the rival banks in Paris was absorbed by the rising monopoly, and another assumed for a time the humble place of intermediary between the great bank

[1] Banks of issue could be formed outside Paris with the consent of the government, but none were established until after the Restoration.

and its less important customers. No provincial bank could thereafter be established except by authority of the government. Under this arrangement, and notwithstanding the provision that no notes should be issued in Paris for less than 500 francs, the circulation of the Bank rapidly increased with its expanding discounts. It is plain in fact that the strong preference of the public for bank credit in the form of notes left but a narrow field for those banks which could only open deposit accounts, and justified the government in its opinion of the importance then to be attached to the right of emission. And the fact that in the existing state of things, with the existing habits of business, credit in the form of notes was so strongly preferred gave to the monopoly of the Bank an influence on the future history of banking in France far beyond that which a similar monopoly could have exercised in the same years in England.

Although the Bank of France still chose its own officers and enjoyed a nominal independence, it was now becoming involved in the bold operations of the French Treasury. Complications thus arising reduced the cash in the Bank, in the latter part of 1805, so far that it was found necessary to limit the redemption of notes to 600,000 francs daily, until such time as specie could be collected in sufficient quantity for complete resumption. The result of this crisis, however, was not to separate the Bank from the government, but to connect them still more closely; and in the spring

of 1806 a measure was therefore adopted which definitely settled the character of the Bank as a public institution, but without any alteration in the essential principles of its organization as a bank. By the doubling of its capital and the extension of its privilege to 1843, not only its preëminence in the financial affairs of France, but its absolute importance in the European world, was assured, so far as depended on legislation. At the same time the direction of the Bank, hitherto confided to a board of regents chosen by the stockholders, was transferred to a governor and two sub-governors, to be nominated by the chief of the state. Under a government not inclined to use power for its own ends, this species of control might easily have become a mere trusteeship on the part of the state; under an emperor like Napoleon it made the bank an engine of the state,—a private corporation, indeed, as regards the legal ownership of its property, but a public office as regards the actual employment of the property. Successive governments in France have used this opportunity in different ways as the case has seemed to require; but such as Napoleon made the Bank, in pursuance of the law of 1806, it has remained ever since,—an institution subject to the control, and often available for the needs, of the government of the day.

In the closing years of the Empire this subjection of the Bank to the government caused a great increase of transactions with the Treasury, which

became more and more compromising and finally far exceeded in amount the advances made to the commercial public. When, therefore, France was invaded by the allies in the winter of 1813–14, a run by the note-holders began, caused, it is probable, chiefly by the fact that the Bank appeared to have no independent existence of its own, and it again became necessary for three months to limit the amount of the daily redemption of notes to 500,000 francs. Full payment was resumed in April, 1814, but the settlement of the affairs of the Bank was pushed on both sides, until its loans were reduced to less than 3,000,000 francs and its circulation had fallen from 95,000,000 francs to 15,700,000. The enlarged capital of the Bank had been found, even in the latter years of Napoleon's reign, to be greater than could be used with profit, and the Bank had therefore, as early as 1812, made large purchases of its own stock. These were continued in 1816, until the capital was reduced to 67,900,000 francs, at which point it remained until 1848.

By the decree of 1808 the Bank had been authorized to establish branches (*comptoirs d'escompte*) subject to approval by the government, plainly with the design of centralizing the banking interests of the Empire under the lead of the great Bank in Paris. Under this decree the establishment of branches in Lyons and Lille was undertaken, although with little success, and one was set in operation at Rouen. The Bourbon government

in 1817 and 1818 closed these branches and established independent banks at Rouen, Nantes and Bordeaux, giving to them the right of emission, and thus reversing the policy of Napoleon. The government of July, following a similar course for a time, established independent banks at Lyons, Marseilles, Lille, Havre, Toulouse, and Orleans, and also authorized the Bank of France to open branches in fifteen other provincial towns and cities, with the monopoly of issue for every place in which a branch was established. Vigorously pursued, this mixed system of branches and of independent banks might easily have been made the means of introducing banking facilities throughout the kingdom, to the great advantage of the country. But no strong policy was adopted; the government established new banks for a time with reluctance and under hard conditions, and after 1838 withheld its encouragement altogether; and the Bank of France, opening its branches fitfully and with little regard for public needs, seemed to prefer that affairs should drift.

The revolution of 1848 found in existence, then, the Bank of France, with its fifteen branches, and also nine independent banks of issue. No system of exchanges or of redemption at a common center had been adopted by the latter; even the branches of the great Bank redeemed each other's notes only at pleasure; so that France felt all the inconveniences of having many issues of notes with but local credit. The suspension of specie payment and the

legal-tender power given to the notes of the Bank of France, and to those of the independent banks alike, added to the confusion, and in the spring of 1848 the provisional government finally cut the knot, by making all the independent banks branches of the Bank of France. Their shareholders, in exchange for their old stock, received shares in the Bank, and the capital of the latter was thus raised to 91,250,000 francs. At the same time the issue of notes of 100 francs was authorized and the total issue of the Bank was limited to 452,000,000 francs. Political and socialist agitation had destroyed all commercial confidence and a rapid liquidation went on; the discounts of the Bank fell off, specie flowed in, and in June specie payment was practically resumed, and the legal-tender provision might perhaps have been abrogated with safety, had the Bank been left to itself. The Treasury, however, was embarrassed, the Bank saw few opportunities of using its resources profitably, and advances to a considerable amount were therefore made by it to the government. Partly as a consequence of these advances the limit of the note circulation was raised in December, 1849, to 525,000,000 francs; and the suspension of specie payment was not ended and the legal-tender power of the notes destroyed, until August 6, 1850. By these means, aided by its own great prudence, the Bank not only passed through the gloomy years from 1848 to 1852 without serious loss, but continued when

affairs were at their worst to earn a modest profit for its stockholders. Moreover, its monopoly of note issue had been reëstablished in practically tee form in which it had been projected by Napoleon, and all subsequent legislation has tended to strengthen the existing system.

A great expansion of the business of the Bank began in 1852. The *coup d'état*, which opened the way for a restoration of imperial government, at all events removed political uncertainty. Commercial confidence thereupon revived, and the discounts and advances made by the Bank rapidly increased, and in 1853 touched a higher point than was ever before known. In view of the general expansion it is not surprising that in 1857 the government determined to double the capital of the Bank, raising it to 182,500,000 francs, at which it now stands. In return for the extension of its charter to 1897 the Bank was required to make a permanent three per cent. loan of 100,000,000 francs to the government, the entire amount derived from the issue of new stock which was taken by the shareholders at a premium. Perhaps the most important of the new features of the charter was the provision made as to the rate of discount. For the greater part of its existence the Bank had striven to maintain the uniform rate of four per cent. The statutes of 1808 had fixed at three months the maximum length of the paper to be admitted to discount, but in periods of difficulty the Bank had sometimes lowered this limit to

seventy-five, sixty, and even forty-five days. In 1854, however, and for some years after, it tried a variable rate of discount, but then found itself hampered by a law passed in 1807, which made six per cent. the limit of legally chargeable interest. The charter of 1857 freed the Bank by special exemption from this restriction, allowing it to charge such rate as it might find advisable, with the provision, however, that the profits earned by charging a rate above six per cent. should not be divided but carried to a permanent surplus.

The charter of 1857 also authorized the issue of notes as small as fifty francs, and the government was empowered after 1867 to require the opening of a branch in every department. The Bank was reluctant, but before 1869 sixty-five branches had been authorized. The republican government in 1873 again applied the spur, and in 1880 all the required branches had been authorized, although a few were not brought into operation until as late as 1882. Since that time the number of communities directly served by the Bank has been further increased, in part upon the initiative of the Bank, but in some measure in response to requirements imposed when its charter was revised in 1897 and again in 1911. In 1928 there were 175 branches and a great number of auxiliary offices, making in all 650 "*places bancables*."

Although branches of the Bank of France do not perform all the functions of the ordinary bank,

the insistent pressure for the extension of its facilities affords striking evidence of the slow development in France of adequate banking facilities. In addition to the necessity resting upon it as a central bank to keep itself in a highly liquid condition, the Bank of France is subject to a special statutory restriction which narrows the field of its operations. The Bank may discount only paper bearing three signatures, unless accompanied by a limited range of securities or by warehouse receipts which may be taken in lieu of one signature. The practical effect of this restriction is to limit the business of the Bank almost entirely to rediscounts for other banks and bankers except in localities in which such lending agencies are lacking or insufficient. In England and in the United States, countries in which banking facilities are widely diffused, little or no business except from banks would be secured by a central bank which required three signatures. In France a considerable part of the business at the smaller branches comes from individual borrowers.

The slow development of adequate banking agencies in France is to be attributed to a variety of causes. The monopoly of note issue has worked powerfully against the spread of banking facilities among a people which has manifested a strong preference for coin and notes as a medium of payment. Aside from the Bank of France and the short-lived provincial banks of issue, the business of banking until after 1848 was conducted entirely

by private banking firms working with their own capital and the funds left with them more or less permanently by a limited circle of depositors. Some of these firms were financially powerful, but many were weak and failures were numerous, especially in 1830 and in 1848, the years of revolutionary changes in government.

The first incorporated banks of discount and deposit were established during the period of rapid economic advance which marked the early years of the régime of the third Napoleon. The number of deposit banks in France has, however, at no time been large, and since the last decade of the nineteenth century four large credit institutions operating numerous branches have virtually monopolized the entire field. The considerable though declining number of private banking firms find it increasingly difficult to hold their own in competition with the credit banks. These institutions compete vigorously with each other, but only within the narrow limits which are largely determined for them by the magnitude of their operations and the wide geographical diffusion of their branches. Little initiative can be allowed the managers of the branches, who are subject to rigid rules and constant supervision from the head office. Loans based on confidence in the character and ability of the borrower the branch manager cannot be permitted to grant since he is commonly a stranger only temporarily in the locality. Small regional banks operating a few

branches can make such loans with less danger of frequent losses. In recent years a number of banks of the type have been established, but the future has yet to disclose whether they can live in competition with the great Paris banks which absorb the bulk of the loans of the highest quality throughout the entire country.

With the opening of the Franco-German war in July, 1870, the Bank of France entered upon a most remarkable period of its existence,—that in which its vicissitudes were most startling and critical, its services to the country most distinguished, and the success of its management most brilliant. Three weeks before the breaking out of hostilities the Bank of France had in its vaults a reserve of cash almost equal to its notes, and amounting to nearly two thirds of all its cash liabilities.[1] The approach of war caused a heavy pressure upon the Bank for loans, and both notes and specie were drawn from it in large amounts,

[1] The chief movements in the account of the Bank of France, caused by the war, can be seen in the following table, given in millions and tenths:

	Notes	*Deposits*	*Cash*	*Disc'd Paper*	*Public Loans*
1870, June 23 . .	1,374.	431.9	1,318.5	558.1	
Aug. 11 . .	1,583.6	582.2	1,028.6	1,181.7	
Sept. 8 . .	1,745.	441.8	808.	1,428.3	
1871, June 29 . .	2,213.	524.1	549.8	741.9	1,403

June 23d was the day when the cash was at its maximum for 1870; August 11th was the day before the suspension; no account was published between September 8, 1870, and June 29, 1871.

and began to find their way either into private hoards or into foreign hands. Neither the government nor the public could see with patience this dispersion of a stock of specie which, it was felt, might be an important resource in the desperate struggle with Germany, and suspension of payment as a precautionary step thus became probable early in August. Shortly afterward the government resolved upon the adoption of a measure suspending the collection of commercial obligations, and this made the suspension of the Bank a necessity. On the 12th of August, then, four weeks from the beginning of the war, a law was passed, as a government measure, and with but one dissenting vote in each house, authorizing the Bank to refuse payment of its notes in specie, and for the second time in its history making its notes a legal tender for debts public and private. The issue was at the same time limited to 1,800,000,000 francs, and authority was given for the emission of notes as small as 25 francs each. On the next day, August 13th, was passed the first of the measures establishing a moratorium which postponed all commercial debts for one month, and then, by successive extensions of time, until July, 1871, without other burden to the debtor than liability for interest until the final payment.[1] And finally, on the 14th of August,

[1] Under the operation of this law the Bank of France held suspended paper to the amount of nearly 870,000,000 francs. Of this more than two thirds was paid in before the expiration of the

the limit of issues by the Bank was raised to 2,400,000,000 francs, on the ground that for the Bank to continue its discounts it must have a wider margin than was allowed by the law of the 12th. This completed the series of measures under the authority of which the Bank was administered during the war.

The state had at the outbreak of the war obtained a small advance from the Bank, and called for others soon after the suspension. During the siege of Paris the branch of the Bank at Tours became the agency by which considerable advances were made to the provisional government at Tours, while the Bank itself was in like manner aiding the government in Paris. When the war with the Commune succeeded that with Germany, these advances had risen in all to 761,000,000 francs, besides a loan of 210,000,000 francs to the city of Paris. The Bank resisted with great difficulty the efforts of the Commune to use its resources in defense of the city, and for several weeks escape from open pillage, or from demands not to be distinguished from it, seemed hopeless. The prudence of the managers, the devotion of their subordinates, and the steady support of one or two members of the revolutionary body itself, carried the Bank safely through the most dangerous episode of its history, and enabled it,

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legal term of indulgence; and of principal and interest less than one per cent. was still unpaid at the end of 1874. Courtois, *Historei*, p. 263.

upon the suppression of the Commune, once more to give its aid freely to the government.[1] In July, 1871, the loans thus made to the state amounted in all to 1,425,000,000 francs, and the government now happily found itself in such a position that it could cease drawing from this source.[2]

The brief statement given on p. 190 shows distinctly enough the change which a year of war had wrought in the affairs of the Bank. An enormous loan had been made to the state simultaneously with an increase of discounts for individuals, and this had been effected partly by the sacrifice of cash and partly by an increase of notes, the volume of which now stood nearly 800,000,000 francs above the highest point ever before reached. This increase of notes had been managed with great caution, so that while it necessarily expelled from circulation a considerable amount of specie, it had nevertheless brought about but a slight depreciation of the paper[3]; and with the repay-

[1] For minute details of the history of the Bank under the Commune, and of the means by which it was saved, see Du Camp, *Les Convulsions de Paris*, iii., ch. ii.

[2] In the *Bulletin de Statistique et de Législation Comparée* for April and May, 1880, is a careful report upon these loans and upon their subsequent payment.

[3] During the war quotations were made of exchange on London and occasionally of gold, indicating in one extraordinary case a premium of four per cent. on specie. After the restoration of order gold ceased to be quoted, and the price of exchange on London fell to a level of about 1 per cent. premium. See the *Economist* for quotations both in London and in Paris. Leon Say's *Rapport sur le Payement de l'Indemnité de la Guerr* gives *a*

ment by the government of the advances made to it by the Bank, the restoration of specie payment promised to be easy. The government, however, was for the time in no condition to undertake the payment of a domestic debt. It had before it the problem of paying to Germany, in the next two or three years, the great indemnity of five thousand millions of francs, to which it was bound by the treaty of peace; it had yet to learn how far its credit would enable it to make this payment by borrowing in the general market, and the most that could be hoped was that it should not have to call upon the Bank for further aid. The latter could not expect, therefore, for several years to come, to extricate the resources which it had lent to the state.

But while the Bank thus saw its resources unavailable for a movement towards specie payments, it was also called upon to increase at once the assistance given by it to commerce. It was of paramount necessity that productive industry should resume its activity without delay, for it was after all in the production of wealth and its proper use that France must find the means of escape from the economic misery caused by the war, and it was the thrift and prosperity of individuals that must support the credit, on which the country now relied in making its settlement with Germany. Special precaution was needed

chart showing the rates of exchange in Paris on London from June, 1871, to September, 1873.

to insure industry from being starved of its needed supplies of capital, while the government was borrowing the vast sum to be paid to Germany. The Bank therefore took the bold course of rapidly enlarging its discounts and advances to individuals; and to make this possible, in a country where deposit accounts and checks are but little used, it was authorized in December, 1871, to increase its issue of notes to not more than 2,800,000,000 francs, and in July, 1872, the limit was further extended to 3,200,000,000. Such an increase of paper with a forced circulation required, as the condition of possible safety from serious depreciation, a further expulsion of specie from use. The smallest notes thus far issued by the Bank were notes for 20 francs authorized by a law of December, 1870; but the law of December, 1871, raising the limit of the total issue of notes, now authorized the issue of notes as low as 5 francs, and thus facilitated the introduction of the bank paper into all the channels of circulation, small as well as great.

With the ground thus prepared, the great scheme for the simultaneous payment to Germany and revival of France was carried through. The government borrowed in all the markets of Europe including that of Germany, but called upon the Bank of France for nothing more than two or three temporary advances, not large in amount and soon repaid. The Bank doubled its discounts of commercial paper for the next three years,

and for this purpose increased the note circulation until at its maximum at the end of October, 1873, it nearly reached 3,072,000,000 francs. From the data subsequently published it appears that the whole of the increase was made by the issue of notes of not above 100 francs, and the greater part of it by means of notes of 50 francs and less. The risks of the operation were amply compensated by its gains. Although the government, in view of the valuable privilege enjoyed by the Bank of making a great issue of notes without the obligation of payment, reduced to one per cent. the interest on its own debt to the Bank, the profits from the immense increase of discounts were heavy. Dividends of 20 per cent. for the second half of 1871, 32 per cent. for 1872, and 35 per cent. for 1873, amply justified the conduct of the management in the eyes of stockholders, and once more proved that in periods of specie suspension no trade flourishes like that of the dealers in credit.

The government was able in 1872 to begin its payment to the Bank at the rate of 200,000,000 francs per year; the payment of the indemnity to Germany was completed in August, 1873, and in 1874 the Bank began its preparations for the resumption of specie payment. France, having a less expanded state of credit than most other commercial countries, had felt the revulsion of 1873 but little, and it was, therefore, possible to make a large reduction in the discounts of the

Bank, and thus to carry on the double operation of accumulating specie and withdrawing notes. The withdrawal of small notes of 25 francs and less was carried on even faster than the general lowering of the circulation, in order to force the introduction of specie into general use and thus to insure the presence of a large mass of metal in the hands of the public, before the Bank should begin its payments. The specie in the Bank reached its highest point in June, 1877, when it stood at 2,281,000,000 francs, showing an accumulation by the Bank of over 1,500,000,000 francs in three years and a half, independently of any made by the public. Of this specie, not far from sixty per cent. was gold, it being the policy of the Bank to hold much gold, partly because gold alone could answer demands for use in foreign trade, and partly because of the uncertainty which obscured the future value of silver.

The precise period at which specie payments should be resumed was determined by the law of August 3, 1875, in which it was provided that when the advances made by the Bank to the State should have been reduced to 300,000,000 francs, payment of the notes in specie should begin. By the end of 1876 only 338,000,000 francs remained unpaid, and it would not have been difficult at any time in 1877 to complete the operation. The year was permitted to pass, however, without taking the final step, the Bank in the meantime dealing upon the specie basis. A

payment of 10,000,000 francs, which lowered the government debt to the required point, was at last made *pro forma* December 31, 1877, and specie payment was resumed with the opening of the new year without shock and without much thought on the part of the public. By the terms of the law the notes continued to be a legal tender for all debts, as they are to-day, but their forced circulation by non-payment was at an end.

At the moment of resumption the outstanding notes of the Bank amounted to nearly 2,462,000,000 francs. This was a great reduction from the maximum reached in 1873, but the amount was still nearly double that which had been usual before the war. It soon became clear that, with the free choice between specie and paper afforded by resumption, France had adopted a permanently larger paper circulation. This was in large measure due to the change of habit produced by any protracted use of forced paper,—a change which makes it highly improbable that any nation, after such an experience, will easily return to the use of paper and coin in proportions the same as were once found satisfactory.

Unfavorable conditions in 1878, 1879, and 1880 caused a moderate decline, which at one moment, lowered the issue to 2,107,000,000 francs. Deficient crops, especially in 1879 and 1880, caused large imports of wheat and heavy exports of gold, a large proportion of the latter finding its resting-place in the United States. The Bank of France

relieved the situation by some increase of its loans, but parted with not less than 500,000,000 francs of its gold. With the return of good harvests the loss of specie was made up, and the increased demand of the public for notes soon began to show itself. Perhaps to some extent by the direct exchange of specie for notes, and in general by an increased proportional call for paper in payments received from the Bank as compared with the use of paper in payments to it, the notes outstanding and the specie holdings of the Bank both began to increase, and the growth of that part of the circulation which simply represents specie in hand, and is not an extension of bank credits in profitable operations, became rapid. In 1884, the issue having risen to 3,162,000,000, the limit was raised to 3,500,000,000 francs. This limit was raised four times during the next twenty years, finally giving the Bank the right to issue 6,800,000,000 francs. The importance of maintaining a limit of circulation which is certain to be raised before it can be reached is not clear, but it was probably to be found, if at all, in the frequent opportunity thus afforded for legislative review of the use made by the Bank of its extensive privileges.[1] During 1913 the circulation of the Bank varied

[1] The committee which, in 1897, reported to the Chamber of Deputies the bill extending the charter, frankly recognized the futility of the limit, but acceded to it as probably harmless, and agreed to the advance from 4000 to 5000 millions as affording an ample margin for some time to come.—*Journal Officiel*, 1897, *Doc. Parl. Chambre*, p. 176.

from 5,350,000,000 to 6,050,000,000 francs, and its specie ranged from 3,815,000,000 to 4,175,000,000 francs, being usually not far from seventy per cent. of the issue.

By the force of circumstances, then, rather than by positive legislation, the Bank of France became the storehouse for a vast mass of specie, conveniently represented in circulation by bank-notes, and thus holds in its charge a large part of the currency of the country. As the specie thus held was in fact a reserve protecting all the cash liabilities of the bank, it is clear that it was an effective safeguard against the ordinary chances of an insufficient banking reserve, and that the Bank of France thus secured great steadiness of movement in its ordinary operations in compensation for the heavy responsibility thrown upon it.

The composition of this vast reserve was hardly less remarkable than its growth. The resumption of specie payments by France took place after the fall in the value of silver had compelled the countries of the Latin Union to suspend its free coinage at their mints. At that moment the Bank held approximately 1,200,000,000 of gold and 867,000,000 of silver. During the years of specie export, referred to above, the Bank parted with gold until its stock in the winter of 1880–81 was reduced to less than 540,000,000, and accumulated silver to the amount of more than 1,200,000,000. With the return of favoring conditions the

Bank was not slow to replenish its stock of gold, and soon showed that it had adopted a definite policy of restricing its holding of silver and strengthening its holding of gold. Its silver after fluctuating within moderate limits declined slowly but almost continuously from about 1890 and in 1913 was less than 700,000,000 francs. Its gold, on the other hand, with some important fluctuations, had tended upwards, exceeding 3,000,000,000 francs in 1913 and usually making about four fifths of the cash reserve, often rising above that proportion and less frequently falling below it.

The success of this course of action was, in part but not mainly, due to the advantage enjoyed by the Bank of France, as a debtor, under the bimetallic system of the Latin Union. Having the legal right to make in silver any payments which it did not care to make in gold, the Bank was able to protect itself against any demands for the latter. The harshness of this policy, which if strictly carried out would isolate the interests of the Bank to the great inconvenience and disadvantage of the community, was softened by the practice of making gold payments at a premium in cases where such concession appeared advisable. The line which separates such a practice from a depreciation of the local standard is narrow, but the Bank of France appears to have managed this delicate business with such caution as to have been able to satisfy the occasional strong demand made upon it for gold, without disturbing in any serious degree

that sensitive index, the rate of exchange upon London.[1]

This gold premium device was an effective means of preventing withdrawal of gold for export at any given moment. It was also one, though by no means the most important, of the influences which occasioned the inflow and retention of the additional gold which was acquired by the Bank of France. The share of France in the distribution of the world's stock of gold was a resultant of all the various influences which have shaped the economic situation and determined the financial position not only of France but of all other countries as well. If Paris had maintained a free gold market it would have experienced a far more considerable demand from foreign borrowers for short-time loans. On the assumption that such accommodation had been granted to the extent of many hundreds of millions of francs and to an increasing extent during the last twenty years or more, before the World War, it is certain that gold

[1] "La Banque de France, grâce à notre régime monétaire qui permet de payer en or ou en argent, a pu réduire les sorties d'or a ce qui était réellement nécessaire aux besions légitimes du commerce international.

"La prime défensive sur l'or a montré une fois de plus son, efficacité, elle nous a permis de maintenir le taux de l'escompte le plus stable et le plus modéré du monde entier, sans gêner en aucune façon les affaires puisque le change sur Londres . . . est toujours resté très voisin du pair."—*Compte Rendu au Nom du Conseil Général de la Banque*, 1897, p. 12.

For some account and criticism of this policy, see George Clare *Money Market Primer*, pp. 110–115.

would have been somewhat differently distributed through the world, a little less in France, a little more elsewhere. To check this tendency it would have been necessary in periods of intense demand for loans to advance discount rates. By this means virtually the same result could have been reached, but it would have involved more variable and on the average somewhat higher discount rates in Paris than it was found necessary to establish under the protection afforded by the premium on gold.

It was not possible to maintain an invariable rate of discount, but changes have been far less frequent and rates have not been advanced so far as in London or Berlin. In those countries the policy of a low stable discount rate could hardly have been adopted with safety owing to the spirit of active enterprise which pervades the business community. In France with its stationary thrifty and, generally speaking, financially conservative population, the policy was not out of accord with the business situation. But the obvious advantages of relatively low and stable rates for loans to the industry of the country were not secured without loss of other advantages. The gold premium policy deprived Paris of the place which it would otherwise have occupied among the international money markets. This consequence of the gold premium policy was recognized, but opinion was widespread in France that it was not too high a price to pay when account was taken of

the benefit of the low stable rates to the large number of small-scale producers and dealers which is still a characteristic feature of French economic organization.

A large part of the loans made by the Bank of France upon commercial paper take the form of a rediscount of paper, on which advances have already been made by the banking houses which are the immediate customers of the Bank. The endorsement by the banking house offering such paper gives the third signature required by the statutes,[1] and the difference between the rate charged by the endorsing names to the original borrowers and that charged by the Bank for rediscounting is the profit reaped by the intermediaries, who thus give the paper the added strength of their names. It is a natural, if not a necessary, result of this system of operation, that the Bank, both in Paris and in the country, is a lender on a large scale to the class of small traders, as is shown by the vast number of bills of exchange discounted by it, and by their small average amounts.[2] The rate charged by the Bank for

[1] In 1897 a motion to authorize the Bank to discount paper with two good signatures was rejected after debate in the Chamber by a vote of 295 to 255.—*Journal Officiel*, June 16, 1897, p. 1540.

[2] The annual reports of the Bank show that the average of bills discounted are for sums under 700 francs, and their average time of maturity about twenty-seven days. The policy of favoring the small trade of Paris was established by Napoleon in the statutes of the Bank in 1808, where it is provided that "il sera pris des mesures pour que les avantages resultant de l'établisse-

advances made upon collateral security is higher by one per cent. than its published rate of discount, but even of the advances a considerable fraction was made up before the war of sums not exceeding 500 francs, the minimum being fixed at 250 francs. Experience has shown that the business thus carried on with the class of small dealers is singularly free from loss, and generally steady in its movement, and it is for the interest of all concerned, as well as a matter of some moment to the general public, that the vast body of actual borrowers thus ultimately depending upon the Bank should be as little disturbed as possible by changes of rate and uncertainty of accommodation.

That the small borrowers should be absolutely secured against a rising money market, even by such a system as this, is not to be expected. The intermediary who obtains his own loans from the Bank at a rate lower than that generally prevailing must still feel a strong inducement to raise the rate which he charges to his own customers. The tendency of such a network of established relation is, however, to moderate this temporary inducement and to secure for the small borrower a part at least of the relief afforded by the flow of loans at a steady rate from the great bank.

ment de la banque se fassent sentir au petit commerce de Paris. . . ." Some of the paper discounted by the Bank in masses for bankers and others is extraordinarily minute. In 1897 the minimum denomination of paper acceptable for discount was reduced by law from 10 to 5 francs. Over four million pieces under 10 francs were discounted in 1913.

The term for which the law of 1857 continued the exclusive privileges of the Bank of France—or, to use the customary phrase, "extended the charter"—ended with the year 1897. A bill providing for a further extension was presented by the government in 1889 and reported by a committee in the Chamber of Deputies in 1891. The complete change which thirty years had wrought in the political, social, and financial conditions of the question caused the debate to take a wide range, and the project was still before the Chamber at its dissolution in 1893. The measure returned with some modification in 1896, and finally became a law, November 17, 1897, extending the charter to the close of 1920, but reserving to the legislature the power to terminate it with the year 1912 by a law to that effect adopted in 1911. The changes of 1897 and also those of 1911 were mainly designed to secure for the government a larger share in the profits of the Bank, and the wider diffusion of its branches and agencies throughout the country. No important alteration was made in the general structure of the Bank or in its administrative organization. It continued to be a bank of the primitive type, with no special provisions by law for the limitation of its liabilities, except the maximum arranged for its issue of notes, and with no provision as to any reserve to be maintained or for the special protection of any particular class of liabilities. In its government it was still where Napoleon placed it, under the im-

mediate direction of a governor and two sub-governors, appointed and removable by the chief of the state, but aided by a board of fifteen regents, who are elected by the two hundred largest shareholders, and whose action is subject to a veto by the governor.

Easily as the authority of the governor might seem to lead to the absorption of the Bank as a part of the political machinery of the state, the Bank has for a large part of its life maintained a considerable degree of independence. Material changes in legislation and important financial operations for the benefit of the government have generally been the subject of treaty and agreement. Even at the crisis of the war of 1870–71, the aid given by the Bank was for the most part wisely measured with careful reference to the maintenance of the credit of the Bank as an independent institution. The law has from the first recognized the importance of guarding the Bank in this respect, by requiring that the governor shall at all times hold at least one hundred shares of its stock, and each sub-governor fifty shares. But the private interests of these officers, so far identified with the interests of the Bank, could not have protected it if the government of the day had not generally used great discretion and forbearance in their relations with it. The governorship of the Bank appears to have been treated but rarely as a political office, and has remained unchanged even by revolution. What-

ever takes place in the political world, the Bank has been regarded and has acted as the supporter rather of government than of an administration, and has thus maintained an unquestioned credit, which is among the most valuable of the national resources for a great emergency.

In the repeated discussions which ended in the passage of the law of 1897, the plan of state ownership of the Bank was urged with great ability by a minority of the Chamber of Deputies.[1] The arguments for and against the proposition turned for the most part upon the financial considerations bearing upon the absorption of functions by the state, and upon the expediency of altering arrangements found to work well in practice. It is interesting to observe that it was pointed out more than once by those who supported the bill as it was passed, that in case of invasion, a public bank, like any other public establishment, would be subject to seizure by a hostile army, and that a bank under private ownership would be exempted like other private property by the laws of war, and in support of this view the decision of the German government recognizing the immunity of the Strasburg branch of the Bank in the war of 1870 was cited with great confidence. The same arguments, the invalidity of which was soon to be disclosed by the seizure of private property of every description by the warring nations, were

[1] The vote finally stood 114 for and 405 against ownership by the state.—*Journal Officiel*, June 10, 1897, p. 1451.

used, *mutatis mutandis*, in the debates in the German Reichstag a year later, when the bill for extending the charter of the Reichsbank was on its passage and there also the question of absorption by the state had come up. Attention was called to the credit which the Bank enjoys by reason of its independent existence and it was stated by the ministry that provision had been made, by an agreement between the government and the Bank defining the kind and amount of support to be given by the latter in a case of public extremity, and affording what was described as "précieuses garanties." The terms and even the nature of this support were declared to be a state secret, no more to be made public than the contents of the arsenals, but the arrangement was vouched for by the ministry as sufficient. By a vote of 298 to 236 the Chamber refused to press for further information, and by nearly the same vote it rejected a proposition for placing the cash of the Bank and its right of issue at the command of the government to be used in the national defense in the event of a general mobilization.

It had been possible to finance the War of 1870 and maintain practically in full vigor the normal limitations that govern the volume of bank credit. Financing the World War and its aftermath proved a very different matter, all the Continental belligerent countries speedily passing far beyond the realm of ordinary banking practice. In France, the undisclosed arrangement with the

Government proved to be an advance of 3,000,000,000 francs at one per cent. during the war and for one year thereafter, but as early as September this amount was doubled. From that time it may be said that for all practical purposes the Bank of France became a mere department of the French Treasury, and that the situation would not have been essentially altered if the government had issued its own inconvertible paper money. The form was retained; the entire currency was an obligation of the Bank of France, but the amount issued was determined by the financial needs of the State. At frequent intervals the limit upon the maximum issue of the Bank was raised and by December 1918 the notes outstanding exceeded 30,000,000,000 francs, about five times the amount in circulation at the beginning of the war. Although there had been a threefold advance in prices, it might have been possible to restore the franc to pre-war parity, if the financial difficulties of the Government had eased with the close of the war. But largely on account of the heavy costs of the reconstruction of devastated provinces, budgetary stability was not attained; the short term, floating debt increased year after year as did also the note issues of the Bank of France. In the first half of 1926, the note issue was not far from 55,000,000,000 francs, prices exhibited a rapidly rising tendency from a level already seven times that of 1913. The seriousness of the situation was most clearly evi-

dent in the sensitive foreign exchange market. Between January and the end of June the franc declined from slightly less than 29 to more than 35 francs to the dollar, while in the succeeding weeks there was a further more considerable decline to 49.2 registered on July 20. There was clear evidence of rapidly growing loss of confidence in the currency, and in view of the recent monetary experience in Germany, a similar disaster for France seemed imminent. At this stage the Government took decided and effective action. Fortunately, the more urgent part of the reconstruction programme had been completed. Expenditures were reduced and additional taxes levied, and budgetary stability secured. Further depreciation was stayed, and by the end of the year stable value for the franc was attained at about 25 to the dollar. This level was attained without serious difficulty since prices had not risen to the full extent of the temporary depreciation measure in foreign exchange rate registered in July.

It is not impossible that a somewhat higher value for the franc might have been established without undue strain, but it was apparent that it was wholly impracticable to attempt to return to the pre-war parity. It would have involved a seventy-five per cent. reduction in prices, and the burden of the government debt could not possibly have been supported at the consequent lower level of money incomes. Accordingly, after the lapse of a sufficient period to test ability to maintain

the position, the franc in 1928 was revalued at about one fifth of its pre-war value, and specie payments, limited for the time being as in England to bullion in large amounts, were resumed. At the same time, a number of important changes were made in the charter powers of the Bank of France. The definite limit on the amount of the note issue was removed and in its place the Bank was subjected to the requirement of a minimum gold reserve of thirty-five per cent. of both its notes and demand deposits. Obligations of the Bank under this legislation cease to be legally payable in silver, thus removing all possibility of a return to the practice of imposing a premium on gold as a means of obstructing its outflow.

After stabilization, the international position of the French money market became conspicuously strong, manifested by the acquisition of gold and of large balances employed in foreign markets. But there was apparently little inclination to develop Paris as an active international market for the financing of trade throughout the world through acceptance credits or through the issue of foreign securities for sale in France. This is one of the factors which, as noted in the preceding chapter, works against the effective employment and distribution of monetary gold, and a return to a condition under which moderate changes in discount rates may be relied upon to maintain or restore the equilibrium of payments between different countries and regions.

CHAPTER X

THE GERMAN BANKING SYSTEM

When the German Empire was established in 1871, the reform of the legislation upon currency and banking was felt to be a pressing necessity. In their coinage some German states had ranged themselves under the thaler system and others under the gulden, but in all there was a mass of old coin in circulation of obsolete denominations. The silver standard had been adhered to by all. Every member of the North German confederation, except the cities Hamburg, Lubeck, and Bremen, and the principality of Lippe, was issuing paper currency for the supply of its own wants. And finally thirty-three banks of issue, with capitals ranging from 1,200,000 marks to 35,000,000, had been established, each upon such basis as the state or city establishing it found good, some holding perpetual charters, some incorporated for terms of years, and some holding only rights revocable at pleasure. These banks differed materially as to the limit of their authorized issues, and were under different obligations as to the holding of reserve. To reduce this mass of confusion to order and to establish unity of system in currency and banking

was a problem which constantly taxed the German mind for the first four or five years of the new Empire.

The law of December, 1871, provided for unity of coinage and prepared the way for the subsequent introduction of the gold standard by the act of July, 1873.[1] Another law of April, 1874, provided for the extinction of the paper currency issued by the several German states, by creating a currency of imperial treasury notes (reichs-kassen-scheine), convertible into gold upon demand at the Treasury, but not a legal tender, and authorizing the distribution of the notes to the several states, to be used by them in taking up their local issues. Of the imperial paper 120,000,000 marks were distributed to the states in the ratio of population, and 55,000,000 more were advanced in amounts as required, and with this aid twenty local issues, amounting in the aggregate to rather more than 180,000,000 marks, were extinguished. And finally by a law of March, 1875, the banks of issue were brought under a common system, and the reform may be said to have been completed.

The new system required the establishment of a central bank to be under the immediate super-

[1] The German law of July, 1873, is often spoken of as a law "demonetizing" silver. In fact it provided for coining gold money and substituting this for silver, but it did not demonetize the silver remaining in circulation. A part of this silver was sold in London between 1873 and 1879, and the remainder was gradually absorbed by its conversion into subsidiary coin.

vision and direction of the imperial government, and the subjection of all other banks of issue to a uniform set of regulations and also to imperial supervision. To secure the first of these two objects, advantage was taken of the peculiar position of the Bank of Prussia. Originally established as a government bank, with a capital of 2,000,000 thalers supplied by the state, this bank had been enlarged by the admission of private stockholders until its capital had risen to 20,000,000 thalers, but without the surrender by the state of its power of control or of its disproportionate share of the profits. As a part of the new system, the Bank of Prussia now became the Bank of the Empire (Reichsbank). The Prussian government was paid for its share of the capital and surplus, and also received 15,000,000 marks for its interest in the goodwill of the establishment; and the capital was then raised by subscription to 120,000,000 marks, the whole of which was thus placed in private hands. The imperial government reserved to itself a direct power of control through the imperial chancellor and also by the appointment of the board of direction, giving to the shareholders the election of a committee charged with certain duties of consultation. Government control is therefore far greater than that exercised over the Reserve banks in the United States and somewhat more complete than in the case of the Bank of France. The Bank was required to receive and make payments, and to con-

duct other financial operations for the imperial treasury, without compensation, and also to manage free of cost the receipts and payments of the several states of the Empire. It was thus made in everything except its ownership a national bank on a large scale, although not the largest, and had its privileges secured to it for fifteen years.

Certain general regulations adapted the thirty-two existing independent[1] banks of issue to the new system. The exclusive right of issuing bank-notes was then given to them and to the Reichsbank, with a provision for transferring to the latter any right of issue which may be surrendered by any of the others. No limit was fixed for the aggregate circulation, but the possible aggregate of notes which could be issued without being covered by cash in hand was fixed at 385,000,000 marks. This total was then apportioned among the banks, having due regard to the amount of the notes previously issued by each and to their probable needs in the future; and by this apportionment the limit for the allowed uncovered issue of every bank taken by itself was determined. For all notes issued by any bank beyond this limit of uncovered issue, the law required that cash shall be held, the bank being allowed to count as cash for this purpose German

[1] The banks which are here called "independent" are often designated as "private banks," to distinguish them from the Reichsbank. But as they are incorporated, the term "independent" appears less likely to be equivocal for American readers.

coin, gold bullion, and foreign gold, imperial-treasury notes, and the notes of other banks; and if any notes are issued beyond the limit, and not thus covered by cash, a tax must be paid on them at the rate of five per cent. per annum. To insure the prompt application of this rule, every bank was required to report its condition at four fixed dates in every month; and any excess of notes, shown by any such report, above the allowed limit and not covered by cash, is then taxed one per cent. It was also required that the cash held, exclusive of the notes of other banks, must in any case be equal to at least one third of the total circulation, and that the remainder be protected by discounted paper, having not more than three months to run. The notes issued under this system thus rested upon a solid basis of specie. By a provision prohibiting the issue of any notes of lower denomination than one hundred marks the presence of an ample specie circulation in the country was secured and also a field for the reichs-kassenscheine the minimum denomination of which was ten marks.

The application of these provisions is best seen by reference to the accounts of the Reichsbank. The limit of uncovered issue allowed to the Reichsbank by the original apportionment was 250,000,000 out of the total 385,000,000 marks. Fifteen other banks, however, declined to issue notes under the conditions required by the law and ten more withdrew their issue before 1894; so that by the

transfer of these abandoned rights of issue, the uncovered limit of the Reichsbank was raised to 293,400,000 marks. The significance of the limit may be understood easily by taking any account of the Reichsbank, as for example that of March 23, 1900. As the notes then outstanding were 1034.4 millions, and the cash reserve 895, the notes exceeded the cash by 139.4; but as the allowed limit of uncovered notes was then 293.4, the Bank could still increase its issue by 154 million marks, without subjecting itself to the five per cent. tax. It should further be noted that the circulation could have been increased by more than 1600 million marks before encountering the absolute limit of the one third rule. The distinguishing novelty of the German law, however, was the important provision by which the tax of five per cent. was imposed upon any excess of notes above the uncovered limit, not offset by cash in hand. The law makes clear the general design of the lawmaking power, to secure the protection of all issues beyond a certain point by cash, and the tax of five per cent. was designed to effect this object, under ordinary circumstances, by taking away the inducement for carrying the issues beyond the line at which taxation begins. But the law at the same time left open the possibility of an extension of circulation beyond the line thus indicated, whenever the reasons for such extension were strong enough to outweigh the tax. A certain degree of elasticity was thus gained at the point where, under the

English law, the rigidity of the line drawn by Peel's Act sometimes presented a serious dilemma. In the familiar case then of a commercial pressure, when the demand for loans is imperative and the market rate is high, it would be possible for a bank, under this regulation, to meet the necessities of borrowers and thus to relieve the public apprehension, although practically forbidden to reap any important profit from this action. In the absence of any such pressure it was anticipated that the issues would be kept within the line, and that the business of issuing notes as gold accumulates, and of paying out gold as notes come in for redemption, would go on naturally and automatically.

In these provisions for the issue of notes are easily traceable the general outlines of the English Bank Charter Act of 1844. The suggested absorption of the entire right of issue by the Reichsbank, emphasized by a provision that the government upon giving due notice might withdraw the right from any bank in 1891, or at the end of any decade thereafter; the fixed limit of notes to be issued without specie; and the automatic arrangement for the issue of notes against cash above that limit,—all were closely copied from the English model. But there were striking differences which are of fundamental significance.

The requirement that the cash should amount in any case to one third of the notes was at that time unusual, although the ratio thus insisted upon had long been familiar in discussions of banking.

The notes of the German bank unlike those of the Bank of England were not secured by any special pledge of the specie or discounted paper which the law required to be held for their protection. Not only did this paper as well as the specie remain in the possession of the issuing banks, but the law gave to the note-holders no special lien upon the paper or specie or right of payment in preference to other creditors. The law in short simply provided by suitable measures that the affairs of each bank, including its issue of notes and the money and securities held by it, should meet certain tests of soundness, believing that both the ultimate solvency of the bank and the prompt payment of its circulation were thus made secure. The credit of the notes were maintained by their strict convertibility and by the law which made them everywhere current in payments to any bank of issue. Every bank was required to pay its own notes on presentation; the Reichsbank also, under ordinary circumstances, pays its notes at its branches; and every independent bank was required to redeem its notes at an agency in Berlin or in Frankfort, as the government might determine, in addition to redeeming at its own counter. Every bank of issue was also required to receive at par in payment the notes of every other bank, with the provision that all notes thus received, except those of the Reichsbank, must be either presented for redemption, or used in payments made to the issuing bank or in the city where it is

established. This provision, which imposed a safe restraint upon the smaller banks, is also significant from its tendency to allow the Reichsbank alone to obtain anything resembling a national circulation.

The note-issue of the Reichsbank, though subject to considerable fluctuation over short periods, has shown a strong upward tendency, the average yearly circulation ranging from 600,000,000 to 800,000,000 marks between 1876 and 1886, and from 1,000,000,000 to 1,400,000,000 marks between 1890 and 1900. During this period the Bank increased its stock of coin in almost the same ratio. Its original holdings were but little more than 500,000,000 marks, while in the closing years of the century they averaged nearly 900,000,000 marks. A part of this specie, as in the Bank of France, was silver, a heritage from the years of silver coinage before 1873. The amount of this silver, first disclosed in 1894, was not far from one third of the entire stock of specie held by the Bank. The proportion of coin and its equivalents to the note-issue had never fallen below 55 per cent. and was usually in the neighborhood of 70 per cent. It follows, then, that the one-third rule had never been of any importance in the operations of the Reichsbank, since the notes had always been less by many hundred million marks than three times its cash reserve.

From 1876 to 1895 the note-issue not covered by cash seldom exceeded the limit at which taxa-

tion begins. During that time the device of the elastic limit was resorted to on ten occasions: five times for one week, four times for two weeks, and once for three weeks. The excess of issue varied from 19 to 109 million marks, but was never as much as ten per cent. of the total circulation. The effectiveness of the elastic limit in time of crisis was never severely tested during this period of twenty years but it was found to meet with much success exceptional temporary demands for currency which under the rigid English system of issue could be satisfied only by the withdrawal of specie or notes from the reserve of the Bank of England. On account of the slight use of checks in Germany the demand for notes is so considerable that the Reichsbank would have experienced great difficulty in meeting the requirements of ordinary years if it had been obliged to work under a rigid system of note-issue. It is noteworthy that before 1895 with one exception[1] the limit had been exceeded only at the end of September and the beginning of October or at the end of December and the beginning of January, at the opening of the autumn or winter quarters of the year, when for various reasons there is regularly an increased demand for currency. These demands the Reichsbank was able to meet without difficulty through the device of the elastic limit.

If the limit was exceeded when the rate of discount was under five per cent., the Bank suffered a

[1] October 31, 1890.

distinct loss, since it must then pay more in taxes than it received for the accommodation which it had given its customers. A five per cent. rate was so far above the normal rate that at times the Bank paid the five per cent. tax when the return it received upon discounts was but four per cent., and on some occasions as low as three per cent. For this reason an increase of the uncovered issue not subject to tax was urged in 1899, when the regular decennial renewal of the charter of the Bank afforded an opportunity to change the law under which its operations are carried on. It was further urged that, in consequence of the growth of population and the rapid economic development of the country, its normal currency requirements were greater than in the early seventies, and that they were neither readily nor economically satisfied under a system of issue which permitted no permanent increase except in proportion to the inflow of specie to the Bank. In support of this contention, attention was called to the frequent resort to the elastic limit in the four preceding years.[1] During these years the tax was paid for thirty-four weeks, the excess on fourteen occasions being above 100,000,000 marks, and more than once rising to nearly 300,000,000 marks. The law of June 6, 1899, renewing the charter, accordingly authorized an increase of the uncovered issue not subject to tax to 450,000,000 marks, a limit which

[1] In 1895 the tax was paid for three weeks, in 1896 for six weeks, in 1897 for nine weeks, and in 1898 for sixteen weeks.

had been exceeded but seven times in the history of the Bank.

This increase in the uncovered issue not subject to tax proved inadequate. During the period of ten years to the next revision of its charter, there was only a moderate increase in the cash holdings of the Reichsbank, and the limit was exceeded far more frequently and to a much greater extent than ever before. With the exception of years of business inactivity, the issue of taxed notes became an almost constant feature of the operations of the Bank. The elimination of the taxation arrangement would have been the simplest and most logical course, since the Reichsbank had never allowed liability to the tax to influence its policy in the determination of the rate of discount or the amount of credit to be granted. At the outset, before experience with the working of the Bank had created unquestioned confidence in the management of the institution, the tax on the notes doubtless served a useful purpose. For the continuance of the tax it was urged that it served as a danger signal to the business community, but evidently, as an indication of the need of caution, it could have little or no value if taxed notes were to be constantly in circulation. In 1909 the limit on untaxed notes was raised to 550,000,000 marks and it was further provided that for the last week of each quarter the untaxed limit should be 750,000,000 marks. This interesting modification of the law was designed to enable the Bank to meet

the heavy requirements for cash which came at the end of each quarter of the year when in Germany, to a greater extent than in most other countries, a great variety of obligations are payable. Under these new arrangements and also owing to some slackening in the activity of trade, the frequency and the amount of taxed issues of notes were greatly reduced though not entirely eliminated during the years immediately following the revision of the charter of the Reichsbank in 1909.

The act of 1909 also made the notes of the Reichsbank a legal tender. This attribute of notes issued by a central bank has little positive importance of a purely banking nature. In the experience of the Reichsbank the notes had been taken as readily as if they had been a legal tender, and although in discussions of the subject much was said of the importance of strengthening the Bank, it is certain that military consideration prompted the change. Upon the outbreak of the European War in 1914, the redemption of Reichsbank notes was immediately discontinued, and every effort was made to substitute the notes for the coin in circulation. The making the notes a legal tender in 1909 was unquestionably a measure paving the way for the monetary arrangements which were to be adopted if the country should engage in a great war.

It was expected when the system was established in 1875 that the Reichsbank would ultimately absorb the issues of all the other banks, either

through the relinquishment of these rights by the banks or in consequence of the intervention of the imperial government, but the seven independent banks which continued to exercise that privilege after 1893 did not appear likely to give up their issues. The Bank of Frankfort alone excepted, they were all outside Prussia, each in one of the other states of the Empire,[1] holding a sort of territorial position, and sustained by the same influences which in so many other directions oppose the complete unification of the Empire. Their aggregate note-issue was small in comparison with that of the Reichsbank, amounting to less than 200,000,000 marks, and their operations did not affect seriously its leading position among German banks. At the renewal of the charter of the Reichsbank in 1899, however, these banks were subjected to an entirely novel measure of restriction which at once led three of them to relinquish the privilege of issue.[2] They were forbidden to discount at a rate lower than that of the Reichsbank when its rate is as high as four per cent., and were allowed to discount but one fourth of one per cent. below its rate when it is under four per cent. For an understanding of the purpose of these restrictions, it must be remem-

[1] They were the banks of Saxony, Bavaria, Baden, South Germany (Hesse), Württemberg, and Brunswick. The notes of the last could circulate only in Brunswick, since the bank refused to subject itself to the general restriction of the law of 1875.

[2] The banks of Saxony, Bavaria, Baden, and Württemberg continued to issue notes.

bered that an increase of the rate of discount by a central bank will not accomplish the end in view unless the general rate for money in the outside market goes up as well. The rate of discount of the banks which issue notes had ranged somewhat below that of the Reichsbank, and their operations had no doubt rendered somewhat less effective its control of the market. But that the restriction upon their action greatly helped the Reichsbank may be questioned, as the general market rate of discount in Germany was chiefly influenced by the action of banks which do not issue notes, and whose operations were not regulated in this matter by law.

The use of notes is still far more important in Germany than in English-speaking countries, though deposit banking has been increasing rapidly in recent years. The relations of these banks to the Reichsbank are analogous to, though in some respects strikingly unlike, those of the London joint-stock banks to the Bank of England. The German deposit banks do not maintain large reserve balances with the Reichsbank but resort to it for re-discounts whenever they experience any considerable demand for money. The Reichsbank possesses the only available store of specie in the country upon which the German banking world can rely to meet any extraordinary demand.[1]

[1] The other note-issuing banks must, to be sure, keep their own reserve against their notes, but their aggregate holdings of specie do not commonly rise much above 80,000,000 marks.

The policy of the Bank must therefore be primarily determined by the necessity of guarding its reserve, not because it issues notes, but because the credit system of the country is built upon the foundation of specie in its vaults. The right of issue has given the Bank prestige, and has been an important factor in the accumulation of the large store of specie in its possession; but the dangers of its depletion, against which the Bank must be ever on its guard, do not come from the noteholders, but are due to its central position in the German money market. Like the Bank of England, the Reichsbank resorts to the variable rate of discount to protect its reserve, raising its rate in times of danger in order to restrain the extension of credit and check the outflow of specie. The importance of the action of the Bank in this matter is clearly recognized in Germany, though at times, like the Bank of England, it experiences difficulty in bringing the outside rates of the general money market up to a close approximation with its own rate. The French method of the premium on gold, though strongly urged upon the Bank, has never been adopted, its managers pointing out that the policy of a variable discount rate had been successful in the past for the accumulation and protection of its stock of specie.

Some increase in the stock of gold held by the Reichsbank came with the expansion of the world's supply of gold which began in the closing years of the last century, but the increase was far less

considerable than in France and hardly in proportion to the expansion of credit which was taking place in Germany. During the years of active business preceding the crisis of 1907, the demand for accommodation at the Reichsbank increased greatly and at times the issue of notes approached the rigid limit of the one-third cash reserve requirement. After the crisis of 1907, which like that in 1901 was handled effectively by the Reichsbank, two means of strengthening its position were adopted. Rates of discount were maintained at a somewhat higher level than the policy followed in previous years in similar circumstances would have required. By this means the further expansion of credit was in some measure checked, and a low price level relative to other countries established which would tend to increase the inflow of gold. The accumulation of gold was also furthered by the passage of a law in 1906 authorizing a limited issue of notes by the Reichsbank in denominations of fifty and twenty marks. These small notes entered into circulation slowly at first, but gradually the habit of making small payments in coin was weakened and by 1912 the notes had become so acceptable that an increase in the issue was required. As a result of these measures the Reichsbank secured a large addition to its stock of gold, which increased from about 500,000,000 marks in 1907 to more than 1,200,000,000 in 1913.

Like the Bank of France and unlike the Bank of

England deposits are a small part of the liabilities of the Reichsbank in comparison with its liability in the form of notes. Although the German deposit banks like those in England hold little cash in their own vaults, they do not maintain large reserve balances at the Reichsbank. They rely upon the conversion of earning assets into cash, through rediscounts at the Reichsbank as an assured means of meeting all unusual demands that may be made upon them for money. In the common American sense of the term, German deposit banks have no reserve. It is their concern to possess a good supply of the particular assets which the Reichsbank will readily discount, and all past experience goes to show that no other safeguard is necessary.

Temporarily idle funds are regularly deposited at the Reichsbank by the other banks and they are obliged to maintain balances with it in order to make use of the admirable service for making settlements between different parts of the Empire which the Bank has established. Compensating balances are required of all who make use of the service in amounts determined by the extent of the use. The balances required from banks are, therefore, relatively large, but obviously such permanent balances are quite unlike the reserve balances maintained by English banks at the Bank of England.

The system of settlement by transfer on its books, by means of which payments and transfers of funds can be made between all those having ac-

counts on its books wherever situated within the Empire, furnishes a most striking example of the energy which the management of the Reichsbank has manifested in modernizing and improving German banking methods. Unlike the Bank of France, the spur of legislation has not been needed to bring about the diffusion of its branches, of which over four hundred and fifty of various grades have been put in operation. Banking facilities through other agencies have also been developed far more adequately than in France. As in France the first banks of deposit date from about the middle of the last century. Most of these banks were established primarily for the purpose of initiating and financing industrial undertakings which required large investments of capital. It was only after long years of gradual development that commercial loans and the receipt of deposits from the people generally became the chief business of the German deposit banks. The original function has not, however, been discarded. They are still the most important source from which capital for new enterprises is derived, and through them the securities of companies which have passed successfully through the initial stages of development are marketed among investors. These financial activities, so contrary to the practice of the division of functions between commercial and investment bankers, formerly traditional in Anglo-Saxon countries, have not involved any apparent loss of strength in the German bank-

ing system. No more than the capital and a part of the surplus of the banks is employed in development work and the capital of the banks is for this reason greater in proportion to deposits than in most other countries.

Banking concentration has reached an advanced stage in Germany, but it has taken a direction quite unlike that in France and in England. Recognizing the inevitable necessity of limiting the activities of a bank operating numerous branches to business, the safety of which can be tested by routine standards, the leading German banks have neither opened many branches nor entirely absorbed large numbers of existing banks. They have preferred to acquire control or at least a voice in the management by the acquisition of shares in provincial banks and have thus secured most of the advantages of centralized organization without sacrificing the advantages of local interest and intimate knowledge of the affairs and needs of borrowers in all parts of the country.

The monetary and banking experience of Germany during and after the World War was not essentially unlike that of France, save that it went one step further to the complete extinguishment of the value of its currency. Depreciation in its later stages, and the decline far more extreme than all former experience seemed to indicate was compatible with the continuance of the use of a currency as money. Finally, in the autumn of

1923, when the mark was approaching a trillionth of its pre-war value, it practically ceased to circulate, barter and payments reckoned in foreign currencies taking its place. As a temporary expedient, an emergency institution (the Rentenbank) was established which issued a limited amount of currency under conditions designed to ensure its stability, and in August 1924 more permanent arrangements were embodied in a charter for a new Reichsbank to take the place and liquidate the obligations of its predecessor. A new monetary unit was adopted—the Reichsmark—having the same gold content as the pre-war mark, and the demand obligations, both notes and deposits, of the older Reichsbank were converted into reichsmarks at the rate of one trillion marks for each reichsmark.

The organization of the new Reichsbank was closely patterned after that of the older institution, but it is significant that the amount of credit that may be extended to the Government of the Reich is definitely limited to a very moderate amount in the charter itself. The device of an uncovered issue of notes that might be exceeded upon the payment of a tax was not retained, but with some modifications the reserve requirements embodied in the Federal Reserve Act of the United States were adopted. Against notes, a forty per cent. reserve must be maintained, three fourths in gold, the remainder in gold, foreign balances or foreign exchange. Against the balance of sixty

per cent. the Bank must hold eligible bills of exchange or checks. A reserve of thirty-five per cent. is also required against deposits, but this reserve may consist of a variety of designated assets of a liquid character, including balances with other banks, bills of exchange maturing within thirty days and secured demand loans. In these requirements the importance of the mainenance of a liquid position is emphasized, and may well prove a desirable modification of the policy of a rigid relationship between gold and the volume of credit that finds expression in the banking legislation of many countries.

As in the case of England, these changes in banking legislation are far less significant than the changed financial position of Germany occasioned by the World War. From a creditor position, at least intermittently, Germany has become a debtor country both on account of Reparations and as a borrower in foreign markets to make up for deficiencies in the domestic supply of capital. The intense German demand for additional capital, and extraordinarily large requirements for exchange with which to make payments are disturbing factors that cannot fail to increase the difficulties of making international settlements. In the handling of these complex problems there is large promise in the proposal to establish a Bank for International Settlements, an agency through which much needed cooperation among central banks may be attained.

CHAPTER XI

THE NATIONAL BANKS OF THE UNITED STATES

THE national banking system owes its existence to the Civil War. Although in the majority of the States the banks incorporated under State authority were badly organized and insecure, and although even such as were on a solid foundation could enjoy little more than local credit, the current of opinion before the war was by no means favorable to any consolidation of banking interests. Discontent with existing systems more frequently took the form of opposition to the existence of any banks of issue at all; the party then apparently holding permanent control of the national administration cherished with pride the traditions of its victorious struggle with the United States Bank, and of its devotion to a gold currency; and probably neither the friends nor the opponents of banks would have then thought the government of the United States able to reorganize upon a common plan the note-issues of all the States. But in 1863 a system of national banks was established with widespread, although not unanimous, consent, and without solid opposition, except from some existing interests threatened or alarmed by the change.

For effecting the revolution thus brought about in little more than three years, the favoring conditions were the unusual assumption of powers by the United States government then becoming habitual under the pressure of a struggle for existence, and the imperious necessity of finding a market for United States bonds for the supply of a Treasury drained by war. In the great borrowing operations of 1861 the Secretary of the Treasury had sold a large amount of securities to the banks of the Eastern and Middle States, but the banks had found themselves embarrassed by the impossibility of using their own notes or their credit in any form in transactions with the government, and both banks and Treasury had been compelled to suspend specie payments at the end of the year. The Secretary had already laid before Congress his plan for the strengthening of bank circulation by a national system of secured bank issues, urging its adoption chiefly as a reformatory measure which might give to the country a solid currency, preferable, in his opinion, to an increase of government notes which must always involve "the risk of a depreciated, depreciating, and finally worthless paper money."[1] Events moved rapidly, and the first resort to legal-tender government notes was authorized by Congress, with the acquiescence of the Secretary, in less than two months after the suspension. The bank proposition, which, considered simply as a

[1] *Finance Report*, Dec. 9, 1861, p. 18.

reform, would then have had small prospect of success, began to gain ground as affording a possible escape from the final flood of legal-tender paper which seemed to threaten. When the Secretary again urged his plan upon the attention of Congress,[1] it had acquired new significance in its bearing upon the finances of the government. Immediate relief to the Treasury by the sale of bonds to the banks to be used as security for their issues was not to be expected, for the organization of banks under the proposed system could not be effected without much delay and many of the strong banks which the Secretary hoped to see converted into national banks already owned bonds in large amounts. Indeed the Secretary contented himself with saying that "in a very few years" the proposed national banks would require bonds to the amount of $250,000,000, and in fact the war was over before their deposits of bonds had risen much above $100,000,000.[2] But the banks were looked upon as important agencies for the government in placing new loans, and their circulation as a medium needed for use in default of specie and likely to facilitate the return to specie payments. In short as the national bank system slowly passed through its successive stages of development from

[1] *Ibid.*, Dec. 4, 1862, p. 17.

[2] In November, 1863, the Massachusetts banks held United States securities amounting to fifty-three million dollars, and the banks of New York, city and country, probably more than one hundred million dollars.

1863 to 1865, its importance as affording in itself a market for United States bonds pretty well disappeared, and its importance as a valuable part of the commercial organization and as the source of a paper currency of remarkable credit and security came to be more and more fully recognized.

The act authorizing a system of national banks was passed in February, 1863,[1] but in many points of detail it proved to be so unsatisfactory and incomplete that only 134 banks were organized under it in the next nine months, and the number had risen to less than 450 in sixteen months. A revised act, making important changes, was therefore passed in June, 1864,[2] and ample provision having been made, under which banks chartered by the States could be reorganized as national banks, the extension of the new system went on rapidly. Its adoption was further stimulated by an act laying a tax of ten per cent. on all notes of State banks paid out by any bank after July 1, 1866.[3] The certainty of the practical exclusion of all State banks from the field of circulation caused the speedy reorganization of the greater part of them as national banks; and thus the national system, numbering 1634 banks on July 1, 1866, at once assumed a preëminence which it was to maintain for many years.

There is no doubt that, in adopting the national bank system, Congress understood that it was

[1] 12 *Statutes at Large*, 665. [2] 13 *Ibid.*, 99.
[3] *Ibid.*, 484.

establishing the agency by which the sole paper currency of the country should be issued in the future. The legal-tender issues were still regarded as a temporary expedient, resting upon the overwhelming exigency of the moment for their justification; the bank act is entitled "An act to provide a national currency," emphasizing by its title the permanence of the substitute which was to fill the place left vacant when the legal-tender notes should be paid; and the text of the act plainly looks forward to the return of specie payment, which should leave specie the only tender for debt.[1] Establishing a permanent system of banks, Congress surrounded them by many of the safeguards which had been adopted in one or another of the various States, providing minutely for their organization and superintendence, and for the publication of their accounts at rather short in-

[1] In 1870, when the return to specie payments finally seemed to have been postponed indefinitely, an act was passed authorizing the establishment of gold banks, issuing notes redeemable in gold coin, and secured by the deposit of "United States bonds bearing interest payable in gold" with the treasurer of the United States. The notes were not to exceed eighty per cent. of the value of the bonds, and were not to be subject to those provisions of law which then limited the aggregate circulation of bank-notes. Several gold banks were organized, chiefly in the Pacific States; but after the return to specie payments, the distinction between the gold banks and others ceasing to be of importance, provision was made by the act of 1880 for their conversion into national banks of the usual type, and there are now no national gold banks in existence. 21 *Statutes at Large*, 66. *Comptroller's Report*, 1890, p. 53.

tervals, and laying down rules, wholesome so far as they go, restricting the kinds of business in which the banks should engage. It was provided also that the shareholders should be responsible ratably for the debts of the banks, each to the amount of his stock in addition to the capital actually invested by him.

A system of banks thus guarded and under the charge of the government itself could hardly be treated by Congress as unworthy of being entrusted with the public funds, as the State banks had been under the Independent Treasury Act of 1846, and provision was therefore made for designating banks as depositories of public money when occasion should require, and for their employment as financial agents of the government, upon their giving satisfactory security, by the deposit of United States bonds and otherwise, for the faithful discharge of these functions. The framers of the measure no doubt looked forward at one time to a more consolidated system of banks, and to a closer intimacy with the government than was in fact established; but their action as it stands marks an extraordinary change of policy, made under the pressure of war, by a government which, hardly more than two years before, trusted no agency whatever with the custody of its funds, recognized no medium of payment except specie, and carefully disclaimed all connection with, or responsibility for, any possible system of banks.

The general provisions of the national banking

system have for their starting-point the restriction of the right of note-issue to national banks, the other functions of banking being left free for banks chartered by State authority, and for private banks. Any national bank, proposing to issue notes, is required to secure them by a deposit of registered bonds of the United States, the bonds being transferred to and held by the Treasurer at Washington, but the interest thereon collected by the bank, whose property the bonds continue to be. The deposit of bonds under these provisions entitled the bank making such deposit to receive from the Comptroller of the Currency, who has the general charge of the system, notes to the amount of ninety per cent. of the market value of the bonds deposited, but not exceeding ninety per cent. of their par value; a restriction which continued from 1863 to 1900, when the limit on note issue was raised to one hundred per cent. These notes when received are in blank, certifying only the fact that the security for them is in the hands of the government; but when signed by the proper officers of the bank, they become its promises to pay upon demand, and can then be issued for circulation. The effect of this arrangement, it will be seen, is simply that a sufficient amount of the property of the bank, required to be held in the form of bonds, is pledged with proper safeguards to insure the ultimate payment of all notes issued by the bank. The notes are also, of course, to be paid by the issuing bank whenever presented, are

to be received in payment by all other national banks, and can be paid to or be used in payments by the government in all cases where specie is not required by law; but they have never been a legal tender as between individuals.

These provisions have secured for the notes a uniform value and give to those of every bank an unimpeded circulation in every part of the Union. If, indeed, the law, as in the act of 1863, still made no further provision for redemption than to require every bank to redeem its own notes when presented at its own counter, the return of notes for payment would rarely take place and their substantial convertibility would be nearly destroyed. But the law of 1864 made provision for redemption by all banks at agencies in the principal cities, and this arrangement continued in force until June, 1874, when the present system was adopted, making the Treasury of the United States the sole redeeming agency for all of the national banks, and requiring every bank to maintain in the Treasury, to be used in redemption of its notes, a reserve equal to five per cent. of its circulation. The chief effect of this system of redemption except in the case of insolvent banks or of banks reducing their issues, has been the easy removal from circulation of notes which are worn, soiled, or otherwise unfit for use. For the establishment of a system which should test effectively and continuously the power of every bank to convert its notes into specie on demand, it would probably

be necessary to require that no national bank should pay out any notes except its own.[1] For the general purpose however of maintaining the convertibility of the aggregate note-issue of the banks, the present arrangement is well devised.

The national bank-note when issued is the promise of the issuing bank, and must be punctually met by it, when payment is required, as any other liability must be. The note, however, also carries with it certain engagements binding upon the government of the United States. The provision for redemption at the Treasury binds the government to pay on demand all notes when presented in due form, and not merely notes to the extent of the five per cent. fund. And in case of the failure of a bank, the law provides for the immediate redemption of all its notes at the Treasury. The government has thus made itself fully liable in any event for the whole amount of the notes. On the other hand it has taken ample security for its reimbursement, by requiring the deposit of bonds as above stated, by requiring that this deposit shall be increased if the value of the bonds declines, by the provision for a reserve of cash to be held by the Treasury, and also by taking for itself a first lien upon all the assets of a bank and upon the personal liability of the stockholders, for

[1] Such a prohibition was the basis on which the "Suffolk bank system" of New England rested, from 1819 to 1866, and maintained at par a note circulation which had otherwise but slender provision for convertibility.

the purpose of making good any possible deficiency in the security already provided. An ingenious provision in the act of 1882 also secures for the government any gain that may ultimately accrue from the destruction of notes while outstanding, or from the failure of holders to call for their redemption. And finally, although the expenses of printing the notes (but not of engraving the plates) of superintending the system, and of providing for the safe-keeping of the bonds deposited, are paid by the government, these charges are offset by a tax of one per cent. per annum on the average amount of notes in circulation, or since 1900 of one half of one per cent. on notes secured by government 2 per cent. bonds. On the whole, therefore, whatever may be gained by the banks from this system, it cannot be said that the liability of the government is onerous.

Much controversy has been excited by the question as to the rate of profits which the national banks have obtained from their right of issuing notes secured by a deposit of bonds. It follows from what has been shown in the preceding chapters that their case is in no respect different as regards profits from that of banks which use their credit in the form of deposits in order to make investments in interest-bearing securities. The notion often entertained that the national banks have some peculiar opportunity of making a double profit, "by receiving both interest earned by their bonds, and interest earned by the loan of the notes

issued upon the bonds," overlooks the fact that every bank uses, as its means for obtaining securities, its capital and whatever credit it can employ in addition. Every bank, then, as a consequence of its use of its credit in any form, must receive interest earned by the investment of its capital and also interest earned by what we may call the investment of its credit; and the fact that the national banks, like others, have the opportunity for making credit as well as capital yield a profit, neither springs from the system on which their notes are secured, nor depends upon it. Indeed, it must be manifest that their deposits yield them a profit in precisely the same way as their notes, and usually much greater in amount. The conclusive practical answer to the idea of a supposed extraordinary profit is to be found, however, in the conduct of the banks themselves, especially after the passage of the act of 1874. This, recognizing the desire of many banks to reduce their circulation and secure possession of their bonds, provided that any bank might deposit "lawful money" with the Treasurer of the United States to enable him to redeem its notes, and thereupon withdraw *pro tanto* the bonds deposited, provided the amount of its bonds left in deposit were not reduced below $50,000.[1] Several important na-

[1] Banks with a capital of less than $150,000 remained subject to the original requirement of a deposit of bonds equal to one third of their capital until 1882, when it was reduced to one fourth and became applicable to all banks with a capital of less

tional banks had never chosen to issue notes, although required by the law to maintain a deposit of bonds; under this provision a considerable number of others reduced their notes to the $45,000 which the required minimum deposit of bonds would support. The withdrawals of notes continued for several years, and although new banks were formed and the note circulation increased in some sections, the total banking capital and note circulation alike declined, until the summer of 1878. Both increased after the resumption of specie payments, but the circulation of bank-notes did not reach the amount outstanding in 1873 of $341,000,000.[1]

The highest point reached by the circulation of the national banks during the twenty-one years following the resumption of specie payments in January, 1879, was at the end of 1881, when it stood above $325,000,000. From that point, its decline

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than $200,000. All bond requirements were repealed by the act of June 21, 1917.

[1] Although in its general theory the national banking system is one of "free banking," under which the business of banking in all its branches is open to all persons who comply with the formalities provided by the law, it was nevertheless felt to be dangerous to allow the issue of an unlimited circulation so long as the currency remained irredeemable. Without restricting the establishment of banks, the acts of 1863 and 1864 therefore limited the aggregate amount of notes to $300,000,000. In 1870 the limit was raised to $354,000,000, and finally by the act of January, 1875, for the resumption of specie payments, all restrictions upon the aggregate circulation of the national banks were removed.

was rapid, with hardly a break in the continuous fall, until at the end of 1890 it was little over $123,000,000. The proximate cause of this remarkable disappearance of what was originally the chief feature of the system was the steady payment of the national debt and rise of the national credit, and the natural disinclination of banks to hold, on any considerable scale, investments which could no longer be relied upon to yield the holder so much as 2⅓ per cent. The extraordinary financial conditions of 1891 and 1892, culminating in the crisis, both commercial and monetary, of 1893, increased the return to the holder of bonds to three per cent., and the bank circulation, for this reason and others, rose to nearly $183,000,000 in October, 1893. In the disturbed years which followed the issue fell slightly, then rose to nearly $211,000,000 at the end of 1896, with a further increase of the earning power of the investment in bonds, and during the three years following fluctuated between $191,000,000 and $215,000,000. The experience of these years proved that the expansion or diminution of national-bank currency was powerfully affected by an influence quite distinct from the need of bank currency for use by the public. Mr. Chase, when advocating the adoption of the national system, had foreseen the possibility that payment of the public debt might compel "a future generation" to find for the bank-notes some security other than United States bonds, but it probably did not occur to him or to

the other founders of the system that the rise of public credit by itself might cause the curtailment and even threaten the extinguishment of the note-issue.

These unexpected results of the bond requirement were moderated by provisions of the Currency Act of 1900 relating to the issue of notes. Banks were allowed to issue notes to the amount of the paid-in capital and to one hundred per cent. of the market value of the bonds deposited, but not exceeding one hundred per cent. of their par value. The act authorized the refunding of the greater part of the funded debt into two per cent. bonds, payable after thirty years, in exchange for several former issues paying higher rates of interest but all redeemable before 1909. Upon notes secured by the new bonds the tax on circulation was reduced from one to one half of one per cent. For at least another generation, then, an ample basis of bonds to secure circulation was provided, and for the time being at any rate the profit to be gained from the issue of notes was slightly increased. Within less than four months after the passage of the law the note-issue, which had remained almost stationary for more than a year, rose from $214,000,000 to $265,000,000 and thereafter continued to expand slowly but almost continuously until 1912 when there was more than $700,000,000 of the notes in circulation. But the system of note-issue was not essentially altered by the act of 1900. The aggregate circulation continued to depend proximately

upon the current price of bonds and not upon the demand of the community for that form of bank currency. Real elasticity, whether for contraction or expansion, was still lacking.

In its regulation of the deposit business of the national banks, the act of 1863 followed the example of legislation adopted in many of the States in the years immediately preceding the Civil War, and prescribed a minimum reserve to be held for the protection of the liability for deposits which continued with no fundamental change until the Federal Reserve banks were established in 1914. For banks in the "reserve cities," named in the original act of Congress or provided for by later legislation,[1] a reserve of twenty-five per cent. of the deposits was required; for all other banks, fifteen per cent. The provisions for determining what should be counted as reserve were, however, less simple. The general requirement was that the reserve shall be "lawful money," or in other words gold and silver coin and certificates and also legal-tender notes of the United States. But Clearing House certificates, which represent lawful money specially deposited for the purposes of the Clearing House association, of which the bank owning them may be a member,

[1] By an act of 1887, any city having fifty thousand inhabitants could be made a reserve city, upon application made by three fourths of the national banks established in it. Since 1913 the power to designate reserve cities has been lodged with the Federal Reserve Board.

and the cash reserve of five per cent. of its circulation, which every bank is required to keep in the Treasury, could also be counted as a part of the reserve against deposits. And it was further provided that, for any bank in a reserve city one half of its reserve might consist of cash deposits in the city of New York, or in any other "central reserve city,"[1] and for any bank outside of the reserve cities three fifths of its reserve might in like manner consist of deposits with banks in reserve or in central reserve cities.

For the enforcement of the provisions as to reserve, the law provides that whenever the reserve of any bank falls below the prescribed limit, the bank shall neither "increase its liabilities by making any new loans or discounts," otherwise than by the purchase of sight bills of exchange, nor shall it make any dividend, until the reserve has been restored to its due proportion. The Comptroller of the Currency is also authorized to notify any bank whose reserve is insufficient that it must be made good, and in case of failure to comply within thirty days, he may, with the concurrence of the Secretary of the Treasury, appoint a receiver to wind up the business of the bank. Although the ample discretion thus given to the Comptroller

[1] After 1887, a city having two hundred thousand inhabitants could be made a central reserve city upon application made by three fourths of the national banks established in it. Chicago and St. Louis at once became central reserve cities but the banks of other cities manifested no inclination to follow their example.

has been used with moderation, the prohibition of further discounts, when the reserve falls below a given point, makes a hard and fast line, the approach to which never fails to cause uneasiness, while in any actual crisis, the fear that the usual accommodation of the public must stop and liquidation must begin is the surest means of increasing the pressure for loans and of thus converting a crisis into a panic.

The permission to count as reserve balances with other banks, which were in fact only demands for cash, had a marked effect upon the composition of the reserve held by the banks as an aggregate, and therefore upon the strength of the whole mass of banks at any given moment. If we take for example the returns of the national banks for September 7, 1899, we find their deposits amounting in the aggregate to $3,031.5 millions, requiring a reserve of $630.8 millions. They were returned as holding $890.5 millions of reserve in all, and were, therefore, on the average, far above the legal minimum. But this great apparent reserve was composed as follows:

Specie	$338.6	millions.
Other lawful money .	127.8	"
Redemption fund . .	10.1	"
Due from agents. . .	414.1	"
Total	$890.6	

Of actual cash, then, the banks of the country at this date held but 466.4 millions, much less than the amount of reserve required for their liabilities,

—the remaining sum, which apparently made their condition remarkably strong, consisting chiefly of debts due from one bank to another. The ability of the mass of banks, therefore, to meet the pressure of a financial crisis was dependent on the ability of the debtor banks, to pay upon demand the sums deposited with them and relied upon by the others as a part of their reserve, and in particular, on the ability of the banks of New York City to meet their demand liabilities. The reserve of those banks, however, on which all the others rested, was but little above the legal minimum at the date named, and sometimes under similar conditions has been below that point, so that with an apparently high reserve for the country at large, there was such weakness at the central and most exposed point as to impair seriously the value of this precaution.[1]

The relation of the New York banks to the other banks of the country, as the depository of their reserves,[2] was plainly quite analogous to that of

[1] The reserve September 7, 1899, was divided between city and country, and classified as follows, in millions:

			Classification of Reserve.			
	Reserve required	*Reserve held*	*Specie*	*Legal Tender, etc.*	*5 p'r c't fund.*	*Due from agents.*
New York City	$176.9	$178.3	$140.7	$ 36.9	$ .8	$ —
Other Res. cities	263.3	307.2	113.7	51.5	$ 1.9	140.1
Country . .	190.6	405.	84.2	39.3	7.5	274.
Totals . .	$630.8	$890.5	$338.6	$127.7	$10.2	$414.1

[2] The central position of New York was not seriously affected by the conversion of Chicago and St. Louis into central reserve cities, under the act of 1887.

the Bank of England as the depository of the joint-stock and private banks of Great Britain. It was a relationship which had developed before the Civil War from motives of business convenience, step by step with the more intimate commercial relations which improvements in transportation made possible. Each city is a natural center for the settlement of payments for its surrounding territory. To facilitate these payments, banks in the vicinity of any city find it necessary to maintain balances with the banks of that city, even if such balances cannot be included as a part of their reserve. A few cities become centers for settlements for entire regions within a large country, and some one city is certain to become the center for settlements between all parts of a country and with foreign countries. It therefore came about that, as for example, banks in the vicinity of Portland, Maine, found it convenient to maintain balances with Portland banks, and the Portland and all other New England banks to maintain balances with Boston banks, so all banks of any importance throughout the country found it desirable to maintain balances in New York, the central money market of the country. In framing the national banking law these arrangements were recognized in the provisions authorizing within certain limits the inclusion of balances with other banks in meeting reserve requirements.

The central money market of a country is, however, much more than a center for making

settlements. It is the one place in any country in which there is at all times an indefinitely large demand for loans. This is because average rates for loans in the central money market are lower than elsewhere in the country. Borrowers from all quarters resort to it for accommodation and financial business of every kind tends to become concentrated there. Elsewhere the demand for loans is more local and cannot be stimulated to any very considerable extent in short periods of time by the offer of a reduction in lending rates. Temporarily idle funds of all the banks of a country can therefore find employment in its central money market or may be attracted thither by the offer of interest on bankers' deposits. By the withdrawal of such funds, on the other hand, outside banks are able to shift to the central money market virtually the entire burden of meeting the situation in periods of financial strain. In the United States with its thousands of independent local banks the burden resting on the New York banks in emergencies was particularly heavy. When banking is conducted by a small number of banks operating numerous branches, united action can be secured with comparative ease. New York, alone among money markets, was obliged to contend against the efforts of thousands of outside banks to strengthen themselves, a cause of trouble which in successive crises proved far more serious than the withdrawal of funds by individual depositors.

For meeting the peculiarly heavy strain to which as the central money market of a decentralized system of banking, it was subject in emergencies, the New York money market itself was not effectively organized. Banking was conducted by nearly a hundred banks, large and small, but none of commanding influence. None of these banks was accustomed to maintain in normal times reserves very much in excess of legal requirements, and although these requirements were imposed so that the banks might have cash on hand available for emergencies, the managers of most of the banks manifested a pronounced reluctance to make liberal use of it. Acting singly each bank was certain to adopt the policy of loan contraction, which, as we have seen in an earlier chapter, cannot be carried far without spreading universal disaster and which is certain to involve the banks in a general suspension of payments. This course was adopted in the crisis of 1857 with such disastrous consequences[1] that in the crisis of 1860 and in subsequent crises arrangements were adopted for securing some measure of common action among the banks. For accomplishing this, the Clearing House Association, in which the banks were already united for important purposes, and from which no bank would willingly find itself excluded, was the natural agency.

A plan of operation was therefore settled upon, which should become binding upon all the banks in

[1] C. F. Dunbar, *Economic Essays*, pp. 278–83.

the Association, when adopted by three fourths of them. By this plan the banks agreed that, for the purpose of enabling them to expand their loans, the specie reserves held by them should be treated as a common fund and, if necessary, should be equalized among the banks by assessments laid upon the stronger for the benefit of the weaker; and that, for the purpose of settling balances between the banks, a committee should be appointed with power to issue certificates of deposit to any bank placing with them adequate security in the shape of stocks, bonds, or bills receivable, and that these certificates should be received in payment by creditor banks. The effect of this arrangement was that any bank which experienced an unusual demand for specie would be supported by the whole of the common stock, and that the debt to the others, which it thus incurred, could be met by a pledge of its securities. Whatever course might be taken then, any bank was as strong in specie as any other. A general increase of loans and liabilities might for the time weaken all, and if there were a further loss of confidence in the community might expose all to a common danger; but no one bank, by holding back its loans could strengthen itself above the others, since the specie which it might thus collect must be held subject to assessments for the common benefit.

The effect of this arrangement was instantaneous. The announcement that it had been made quieted the money-market and ended the

panic. In the next week the banks increased their loans rapidly, and nearly the whole of the additional loans went to swell the mass of deposits, with only an inconsiderable loss of specie. The expansion was continued at a more moderate rate for several weeks until, under the natural effect of the revulsion in business, the demands for loans fell off and specie began to accumulate.

The issue of Clearing House loan certificates and the equalization of reserves were again resorted to in 1861 with equally good results. The situation in 1873 was more serious. The money supply of the country could not be enlarged in any way, even by the importation of gold, since it consisted of a definite amount of irredeemable government paper and bank-notes. The reserve strength of the banks, while sufficient to carry them through the worst of the storm, was not enough to enable them to avoid the resort to suspension.

In 1884, the next occasion when Clearing House loan certificates were issued, the opposition to the provision for the equalization of reserves was so widespread that it does not appear that it was even formally considered. The ground for this opposition can be readily understood. In 1873 the practice of paying interest upon bankers' deposits was generally regarded with disfavor. Only twelve of the Clearing House banks offered this inducement to attract deposits; but by this means they had secured the bulk of the balances of out-

side banks. It was in meeting the requirements of these banks that the reserves of all the banks were exhausted at that time. The non-interest paying banks entered into the arrangement for the equalization of reserves in expectation of securing a Clearing House rule against the practice of paying interest on deposits. But their efforts had resulted in failure. Some of them had employed their reserves for the common good most reluctantly in 1873, and the feeling against a similar arrangement in 1884 was naturally far stronger and more general. Moreover, the working of the pooling agreement in 1873 had occasioned heart-burnings which had not entirely disappeared with the lapse of time. It was believed, and doubtless with reason, that some of the banks had evaded the obligations of the pooling agreement. It was said that some of the banks had encouraged special currency deposits so as not to be obliged to turn money into the common fund. Further, as the arrangement had not included bank-notes, banks exchanged greenbacks for notes in order either to increase their holdings of cash or to secure money for payment over the counter. Here we come upon an objection to the pooling arrangement which doubtless had much weight with the specially strong banks, although it is more apparent than real. In order to supply the pressing requirements of some banks, others who believed that they would have been able to meet all the demands of their depositors were obliged to restrict pay-

ments. That such an expectation would have proved illusory later experience affords ample proof. When a large number of the banks in any locality suspend the others cannot escape adopting the same course. But in 1884 the erroneousness of the belief had not been made clear by recent experience.

The New York banks weathered the moderate storms of 1884 and 1890 without suspension, by means of the Clearing House loan certificates alone, and in the course of time all recollection of the arrangement for the equalization of reserves seems to have faded from the memory of the banking community. There was, however, in those years another potent influence which tended to lessen the likelihood of suspension following the issue of loan certificates. Many banks were unwilling to take them out, fearing that such action would be regarded as a confession of weakness, and continued the payment of cash in the settlement of Clearing House balances. In 1893 also only a small part of the balances between the banks was settled in certificates at first; but by the end of July practically all balances were settled in that way and suspension followed at once. In 1907 all the banks having unfavorable balances, with but one important exception, took out certificates on the first day that their issue was authorized, and suspension was then for the first time simultaneous with their issue.

The connection between suspension and the use

of Clearing House loan certificates as the sole medium of payment between the banks was simple and direct. The bank which receives a relatively large amount of drafts and checks on other banks from its customers cannot pay out cash indefinitely if it is unable to secure any money from the banks on which they are drawn. So long as only a few banks are taking out certificates and the bulk of payments are made in money, no difficulty is experienced; but as soon as all the banks make use of that medium, the suspension of the banks which have large numbers of correspondents soon becomes inevitable. The contention of bankers both in 1893 and in 1907 that they had not suspended since they had only refused to honor drafts on other banks was untenable. The Clearing House loan certificate was a device which the banks themselves had adopted and they had failed to provide any means for preventing partial suspension as the result of its use.

That the arrangement for equalizing the reserves adopted in 1873 would have availed to prevent suspension on subsequent occasions is highly probable, indeed a practical certainty. In 1893 events proved that the banks had maintained payments up to the very last of the succession of disasters with the results of which they had been contending. During August the number of bank failures was not large and none of them was of great importance. We cannot, of course, know how soon money would have begun to flow back

to New York, but certainly the suspension of payments could hardly have hastened the movement. From the beginning of September the reported movements of currency showed a gain for the New York banks, and for the week ending September 16th the gain was no less than $8,000,000. One month more of drain, therefore, was the most that the banks would have been obliged to endure, and for the needs of that month the banks would not, as in 1873, have been confined to the single resource of the $79,000,000 of the cash in their vaults.

Similarly, the enormous increase in the money supply of the country in November and December, 1907, would have offset much of the loss of reserve which the banks would have incurred, if they had continued to meet all the demands of their customers for cash. And, finally, it may be observed that in the unlikely event that alarm had not been allayed and suspension in the end had become unavoidable, it would not have made any practical difference to depositors whether the reserves of the banks had been but ten per cent. rather than twenty per cent. of their demand liabilities.

The fundamental defects in the banking system of the United States, in particular the absence of adequate lending power and inability to make effective use of the cash reserves of the banks, were disclosed not only during the serious crisis of 1873, 1893, and 1907, but also on frequent occasions of more moderate financial strain. But the need of

radical change in the banking arrangements of the country was not clearly recognized until after the crisis of 1907. The attention of bankers as well as of the public was for many years absorbed by the more urgent needs of monetary reform—after 1873, the resumption of specie payments, and after 1893, the repeal of the silver purchase law secured at once, and the establishment of the gold standard upon a firm basis which was finally accomplished with the passage of the Currency Act of 1900. Difficulties due to monetary causes were entirely absent in the crisis of 1907, and consequently the unsatisfactory state of the banking machinery and practice of the country at length became clearly evident. As a temporary measure, pending more thoroughgoing legislation, an act was passed in 1908 empowering the banks to issue bank-notes secured by bonds other than United States bonds and by commercial paper, but subject to taxation sufficiently onerous to prevent issue except in emergencies and to insure speedy retirement. These notes proved of great service during the crises which came in August, 1914, with the outbreak of the European War. Somewhat more than $300,000,000 of the notes were issued and, although Clearing House loan certificates were also used, the suspension of currency payments was avoided. As a means of overcoming the most serious of the difficulties encountered in previous crises, the notes proved an effective device, but it was rightly believed that the banking

legislation of the country was antiquated and that many and, in some directions, very fundamental, changes must be made if the banks were to be placed in position to render the greatest possible service to the community in normal times as well as in emergencies. This view of the situation found expression in the Federal Reserve Act of December 23, 1913, a measure which gave the necessary legal authority for incomparably greater changes in the banking structure and practice of the country than followed the passage of the National Banking Act fifty years before.

CHAPTER XII

THE FEDERAL RESERVE BANKING SYSTEM

THE primary purpose of the Federal Reserve Act was to give the banking system of the country those elements of strength which had been secured in various European countries through central banks. It was indeed strongly urged that a central bank would be the simplest and most effective means of accomplishing the object in view, but after much discussion a more complicated organization was adopted. Instead of a central bank operating branches in many cities, the country was divided into twelve districts in each of which a Federal Reserve bank, with power to open branches in its own district, was established. Each Federal Reserve bank performs the functions of a central bank for its own district. The advantages of local management are thus secured, while provision is made for supervision and some measure of unity in policy and operation through a central authority, the Federal Reserve Board appointed by the President of the United States.

A central bank or a system of regional central banks necessarily involved placing somewhere very

extensive power to influence the supply and cost of credit, and public opinion demanded that this power be subjected to a large measure of government supervision and control. Under any central bank plan, government supervision and control could hardly be made effective without at the same time placing the details of operation in charge of government officials. Few of the most ardent advocates of a central bank were prepared to take this extreme step. Under the plan of organization of regional banks, the difficulty of combining government control and private management vanished. Purely banking matters, such as the granting of loans, could be entrusted to boards entirely or mainly composed to persons selected by the bankers whose funds were to provide most of the necessary resources. On the other hand, supervision, and whatever measure of control might be deemed advisable, could be placed with a board mainly or entirely appointed by the President of the United States. Differences of opinion may be entertained regarding the particular arrangements in the Federal Reserve Act for selecting the various administrative bodies, and regarding the division of power between the directorates and officers of the Federal Reserve banks and the Federal Reserve Board, but if experience should disclose defects in the organization, it is flexible enough to permit at any time an extension of government or of banking influence.

It is not in organization alone that the Federal Reserve banks differ from the central banks of other countries. Like them, the reserve banks possess large resources and exercise wide powers, but the method of securing these resources and the powers which they may exercise are determined by legislation which in many respects was unlike that to be found elsewhere. All these differences are in large measure due to the exceptional circumstance that the reserve banks were superimposed upon a fully developed system of banks. In other countries the functions of central banks had been gradually developed from small beginnings along with the growth of the banking operations of other institutions. The United States provides an instance of the establishment of central banks after its banking business had reached large proportions and a stage of development in which a monopoly of note-issue would not place other banks in a condition of constant dependence upon the central banks. It was necessary to make certain that the reserve banks would have large resources at the outset and to intrust these resouces to an untested management. Exceptionally detailed legislative provisions relating to the organization, resources, and operation of the reserve banks were therefore inevitable if strong central banks were to be established enjoying the full confidence of the banks and the general public.

The difficulties encountered in providing a fully developed banking system with central banking

machinery are strikingly reflected in the provisions of the Federal Reserve Act designed to secure to the reserve banks ample funds for their operations. Institutions might have been established with large capital, and a monopoly of the right of note-issue, authorized to act as government fiscal agents, and to deal with the general public. Such institutions might perhaps in the course of time have become central banks, the main reliance of other banks in emergencies. But in order to avoid competition with existing banks, the act provides that the receipt of deposits aside from check clearing accounts by the Federal Reserve banks, and their normal lending operations, shall be confined to those banks which subscribe to the capital and maintain balances with them. Obviously, then, if banks in large numbers did not accept the arrangement, subscribing to the capital and resorting to the new banks for accommodation, the system could not be put into effective operation. Moreover, it was necessary that many banks should enter the system at the outset. An attitude of hesitation would change to one of positive distrust, if the initial response were inadequate.

All banks entering into direct business relations with the reserve banks were, therefore, required to subscribe to the capital and deposit a part of their reserves in the reserve bank in the part of the country in which they were situated. But if the banks had been left full freedom of choice in the

matter, it was by no means certain that the prospective advantages of the Federal Reserve system would attract at the outset a sufficient number of banks to provide adequate resources. In fact, only a very small number of banks which were not compelled to join—banks and trust companies organized under State law—entered the system during the first three years that it was in operation. The national banks were in an entirely different position. Within sixty days after the passage of the Federal Reserve Act they were obliged to signify their assent to its terms on pain of forfeiture of their charters. Conversion into State banks was possible but if any considerable number of national banks had refused to enter the system, they would have incurred a heavy loss on their holdings of two per cent. government bonds deposited as security for their issues of bank-notes. Only 18 out of 7493 national banks took this step and the course of some of these was determined by other considerations. The organization of the reserve banks could accordingly be perfected with the assurance that the banks would have very considerable resources when they were ready to begin operations.

In the meantime, the Reserve Bank Organization Committee, consisting of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency, was engaged upon the highly difficult task of dividing the country into not less than eight nor more than twelve

districts, and the selection in each district of a city in which a reserve bank was to be established. This Committee announced its decision on April 2, 1914. It divided the country into the maximum number of districts designating as Federal Reserve bank cities Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco.

A smaller number of districts would have been in some respects advantageous, particularly in ease of management and presumably in lower cost of operation. On the other hand, experience with the working of the system has not disclosed serious defects which would have been avoided if a smaller number of banks had been established. Moreover, in favor of the larger number of districts there were a number of considerations of more weight than any which could be advanced in favor of a smaller number. It is clearly desirable that all banks should have ready access to their reserve banks. Even with twelve districts the area of some of them, notably the San Francisco district, is undesirably though necessarily large. Through the establishment of branches this difficulty can, it is true, be met in some measure. But it is significant that the entire directorate of the San Francisco Reserve bank is drawn from that city and its vicinity. With a smaller number of districts it would have been necessary either to have greatly enlarged the area of the southern

districts and those west of the Mississippi River, already sufficiently large, or to have joined the Boston and Philadelphia districts to New York. Whatever merits the latter arrangement might have from a banking standpoint, it would have been distinctly contrary to the spirit of the Federal Reserve Act. Whether wisely or not, one of the avowed purposes of that measure was to lessen so far as possible the dominance of New York over the financial activities of the country. The size of each reserve bank is determined mainly by the size of its member banks. Owing to the relatively great banking resources of the northeastern States, and especially of New York City, the New York Reserve Bank, though it includes only New York State and a part of New Jersey and Connecticut, has over thirty per cent. of the resources of the twelve reserve banks. If the banks of the Boston and Philadelphia districts had been included, the resources of the New York Reserve Bank would have been increased to over forty-five per cent.

When sufficient time has elapsed for the system to be fully developed and tested by experience, it may perhaps prove desirable to reduce or to enlarge the number of districts. Modifications of this sort will, however, require congressional action. The authority granted the Federal Reserve Board in the Reserve Act "to revise the determinations of the Organization Committee" has been interpreted by the Attorney-General of the United States to extend only to modifications

of the boundaries of districts and does not give the Board authority to reduce the number of districts or to change the location of reserve cities. A few changes in the boundaries of districts have been made by the Federal Reserve Board. The most important of these was the transfer of the banks of Northern New Jersey from the Philadelphia to the New York district. Requests for more radical changes, such as the transfer of banks in Wyoming and Nebraska from the Kansas City to the Chicago district, were very properly deferred until sufficient time had elapsed to yield a better understanding of the working of the system. Further slight changes may be anticipated from time to time, but the need for important change will never be of an urgent nature requiring prompt action. It was seen from the outset that the power to establish branches was to render not only the exact conformation of the districts but also the location of the parent banks a matter relatively of secondary importance owing to the fact that with a thorough branch system in effect, the mere location of the actual points of rediscounting or holding reserves would be of no primary significance. This in fact turned out to be the case, and save for the psychological atmosphere and local influences which always affect the personnel of every institution, it is probable that the exact site of Federal Reserve Banks or the exact conformation of their districts has become a secondary matter. Certainly it is one which dropped from view within a com-

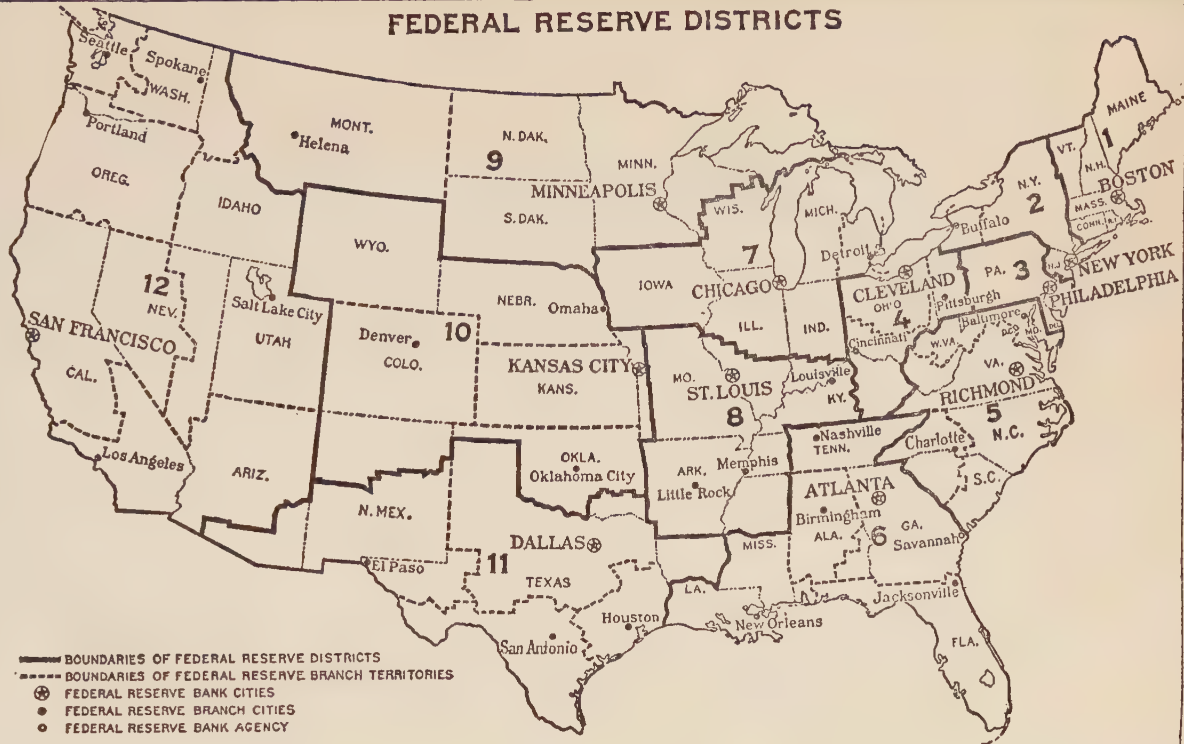
paratively short time after the organization of the system.

As thus finally developed the system with its twelve districts and twenty-five branches assumed by the close of 1928 the form indicated in the accompanying map.

Following the announcement of the division of the country into districts, the banks in each district were classified for electoral purposes into three groups: the first group contained the banks having the largest capital and surplus; the second group, those next in size, and the remaining banks in the third group. Nominations followed, and early in July each group of banks in the several districts elected two directors for its reserve bank —a banker (Class A director) and a person "engaged in commerce, agriculture, or some other industrial pursuit" (Class B director). This somewhat cumbersome method of choosing directors is designed to insure representation to the smaller banks. The arrangement is one which might on occasion prove useful, but might also yield a management lacking in unity of purpose. With a small electorate consisting of men of wide business experience, a particular method of election is not likely to have much significance one way or the other. At all events, in the selection of directors it is probable that virtually the same men would be chosen if each bank cast a ballot for the entire number.

With the election of reserve bank directors by the

FEDERAL RESERVE DISTRICTS



member banks, the work of the organization committee was finished. No further steps could be taken toward the establishment of the banks without action by the Federal Reserve Board, which took the oath of office on August 10, 1914. Eight members constitute the Board (increased from seven in 1923 in order to give representation to agriculture), the Secretary of the Treasury and the Comptroller of the Currency *ex officio*, and six members appointed by the President of the United States by and with the consent of the Senate. Of the six appointed members, not more than one shall be appointed from any Federal reserve district, and due regard is to be given to the different agricultural, commercial, industrial and geographical divisions of the country. The term of office of the appointed members is ten years; but those first selected were to serve one for two, one for four years, and so on, so that the term of office of one member may expire every two years.

Upon taking office the Federal Reserve Board at once gave its attention to the selection of the three government (Class C) directors for each of the reserve banks. It was not until these were appointed, shortly after the middle of September, that further progress could be made toward completing the organization of the system. By far the most important duty devolving on the directors of the reserve banks in this stage of the organization was the selection of governors, as the

chief executive officer of the reserve banks is styled. There is no mention of this important official in the Federal Reserve Act, which simply provides that the Reserve Board shall designate one of the government directors, who must be a person of tested banking experience, as chairman of the board of directors and Federal Reserve agent for each reserve bank. In practice the governors have been the active managers of the banks, while the chairmen have been the channel through which the Federal Reserve Board acts in regulating and supervising the operations of the banks. Notwithstanding this division of responsibility, the arrangement has in general worked smoothly in practice. The governors have been a potent factor in the development of the system. They are all bankers often comparable in standing and experience with the presidents of the banks in the cities in which the reserve banks are established, and occupy a position of greater dignity and influence than managers of branches could possibly attain. While the Reserve Act was passing through Congress, many bankers favored a central bank with branches. Happily, the plan of a decentralized system was adopted. Each Federal Reserve bank is in large measure an independent institution managed by local people. Its officers and directors are in position to speak with authority for the different sections of the country which they represent. The judgment of the governors of the reserve banks, backed up by their boards of di-

rectors, has had great weight in the development of the reserve system, and may be expected to counteract a seemingly inevitable tendency toward rigid bureaucratic management when business is conducted by government officials.

Organization of the system was completed with the selection of the members of the Federal Advisory Council. This council consists of as many members as there are Federal Reserve districts, the board of directors of each Federal Reserve bank appointing one member. The function and powers of the council are purely consultative. It meets regularly four times each year at Washington, and at other times there or elsewhere if deemed necessary by the council itself. It is authorized to confer directly with the Federal Reserve Board. It may prove to be an important part of the organization, but this does not seem probable. With a scattered membership and holding regular meetings only at long intervals, it is not to be expected that the Council will be in close touch with the Federal Reserve Board, or in a position to formulate policies and urge them effectively. From individual members of the council, the Federal Reserve Board should secure valuable information regarding conditions in different parts of the country; but the work of the council itself as an organized body seems likely to be of a formal and perfunctory nature.

On October 26, 1914, the Secretary of the Treasury issued formal notice that the reserve

banks would open on November 16, 1914. On October 28th, the Reserve Board called upon member banks to make on November 1st the first payment on their subscriptions to the capital stock of the reserve banks, an amount equal to 1 per cent. of their own capital and surplus. This payment brought into the reserve banks slightly more than $18,000,000. Similar payments were made on February 1 and May 1, 1915, as required by the law. This completed the payment of one half of the subscriptions of member banks to the capital stock of the reserve banks. The remainder is subject to call by the Federal Reserve Board at any time, but it is altogether unlikely that it will ever be required, since the present paid-up capital of the reserve banks is sufficient for every purpose. The total paid-in capital of the banks on July 17, 1929, was $161,547,000; it is subject to constant slight fluctuations with changes in the capital and surplus of the member banks and with changes in membership. Shareholders in the reserve banks are entitled to a cumulative dividend of six per cent. A limited dividend is obviously wise, since it tends to eliminate the profit-making motive in the management. Whether all the Federal Reserve banks will regularly earn the six per cent. dividend is, of course, not certain; but it seems highly probable, since the danger of serious losses is remote, and no interest is paid to the member banks on their balances. In any event, regular dividend payments have been

made certain by the accumulation of a large surplus, which in July, 1929, amounted to $234,398,000. All earnings in excess of the dividend are to be paid into the surplus fund until it has become one hundred per cent. of the subscribed capital stock of each bank. Thereafter ten per cent. of earnings are paid into surplus, the remainder to the government as a franchise tax. Whatever is received by the government from the Federal Reserve banks is to be used at the discretion of the Secretary of the Treasury, either to increase the gold reserve against United States notes or for the reduction of the interest-bearing debt.

On November 16, 1914, the day the reserve banks opened, a much larger sum was transferred to them—a certain percentage of the required reserve of all member banks. Central reserve city banks deposited an amount equal to 7 per cent. of their own deposits, reserve city banks a preliminary deposit of 3 per cent., and country banks 2 per cent. The total amount of these initial reserve deposits received by the reserve banks was in the neighborhood of $230,000,000, so that with the first instalment of capital they began operations with cash resources of about $250,000,000. These transfers of funds were made without the slightest financial disturbance, since on the day of the opening of the reserve banks the required reserves of all the national banks were materially reduced. For banks in central reserve cities the reduction

was from 25 per cent. to 18 per cent. of demand deposit liabilities, for reserve city banks from 25 per cent. to 15 per cent., and for country banks from 15 per cent. to 12 per cent. Against time deposits, which had previously been subject to the same reserve requirements imposed on demand deposits, a reserve of only 5 per cent. became effective for all three classes of banks. With the exception of the banks in central reserve cities, this initial transfer was only one of a succession of deposits which member banks were required to place with their reserve bank. In addition to the initial transfer (3 per cent. of their deposits in the case of the reserve city banks, and 2 per cent. in the case of the country banks), both these classes of banks were required to deposit three additional instalments of 1 per cent. each, on November 16, 1915, and on May 16 and November 16, 1916. These provisions of the Federal Reserve Act relating to the reserves of member banks were fundamentally changed by the Act of June 21, 1917, which in a number of important ways amended the original act. The reserve balances of banks in central reserve cities were increased from 7 to 13 per cent. of demand deposits; of banks in reserve cities from 6 to 10 per cent. and for country banks from 5 to 7 per cent., together with a balance for all classes of banks of 3 per cent. of time deposits. These increases in the balances to be maintained with reserve banks were accompanied by the repeal of all provisions of

law relating to the maintenance of reserves in the vaults of the banks. The banks must of course continue to keep cash on hand but the amount was left entirely to their own determination, on the sound theory that this is a need for which every bank is certain to make provision. For extraordinary requirements, especially those in emergencies, money concentrated in the reserve banks is far more serviceable than when scattered among thousands of local banks throughout the country. By this change in the law regarding the reserves of member banks reserve balances on deposit with reserve banks were increased by about $300,000,000 and in July, 1917, stood at more than $1,100,000,000.

One of the most perplexing problems that presented itself in framing the reserve act was the disposition to be made of the national bank-notes and the 2 per cent. government bonds which secured nearly all of them. Somewhat complicated arrangements were adopted, designed to bring about the gradual retirement of the notes, to protect the national banks against loss, and at the same time avoid encumbering the reserve banks with many hundred millions of dollars of dead assets in government bonds.

The Federal Reserve Board is authorized to require the reserve banks to purchase each year at least $25,000,000 of these bonds from member banks, or (since this will also maintain the price of the bonds) in the open market. Each bank

must take an amount of bonds equal to its proportion of the total capital and surplus of all of the reserve banks. They may be used as security for bank-notes issued under exactly the same conditions as the circulation of the national banks except that the issue is not limited to the amount of the capital of the reserve banks. They may also, losing the circulation privilege, be converted one half into 3 per cent. thirty-year government bonds and one half into 3 per cent. treasury notes, subject to the obligation of renewal each year for thirty years. Purchases of bonds under these arrangements were made in 1915 and 1916 and a small amount of Federal reserve bank-notes were issued. With the entrance of the United States into the World War, purchases were discontinued and have never been resumed.

As an incident of these operations, two of the reserve banks for a number of years issued a small amount of Federal Reserve bank-notes, and a much larger amount, covered by securities created *ad hoc* by the government, was issued in 1918 to take the place of silver certificates retired in order to make available for export the silver held in the Treasury for their redemption. Within a few years thereafter, an equivalent amount of silver was purchased, silver certificates issued, and the Federal Reserve bank-notes were retired from circulation. Like the national bank-notes and unlike Federal Reserve notes, Federal Reserve bank-notes require no gold reserve, nothing more

than the maintenance of a five per cent. fund at the United States Treasury. The advisability of the resumption of the issue of these notes in the future would seem to depend upon the adequacy of the monetary supply of gold. A definite reserve of gold against all of the currency of a country is not essential either to give confidence or for practical needs. Gold can be safely economized by the issue of some part of the currency that will in all circumstances remain in circulation under conditions that do not involve the maintenance of a reserve. For this purpose the arrangements under which Federal Reserve bank-notes may be issued would require only legislation prescribing the securities acceptable as cover for the notes, and presumably a limitation upon the aggregate amount that might be issued.

The provisions in the reserve act regarding the issue of Federal Reserve notes are extremely complicated, and are in some respects quite without precedent. The notes are subject to a variety of restrictions designed to keep the total amount issued within safe limits, but they are not of such a nature as to deprive the notes of the qualities of an instrument of bank credit. In addition, the notes are made obligations of the government of the United States, which also undertakes to redeem them at Washington. The obligation of the government is in addition to and does not take the place of any banking safeguard. It was designed to meet the desires of the very large

number of people throughout the country who believe that the issue of money is a government function. To many bankers and others familiar with our past financial history, this provision in the bill was most distasteful. Their opposition, though natural, was, however, neither very practical nor reasonable. It was based very largely upon the fear that the government obligation on the notes would prove an entering wedge for an issue of fiat money at some future time. But paper money cannot be issued under the terms of the act for the purpose of meeting government expenditures. Additional legislation would be necessary, and the possibility of such legislation is not appreciably increased by making the notes which are to be issued by the reserve banks an obligation of the government. On the other hand, this provision won many friends for this important piece of banking legislation; it allayed opposition which would always have been a serious menace to the permanence of the new system.

The quantity of Federal Reserve notes which may be issued is wholly within the control of the Federal Reserve Board; but the initiative in taking out circulation rests entirely with the boards of directors of the reserve banks. Applications for notes may be made at any time by a reserve bank to its Federal Reserve agent, the member of its board of directors who is the medium of communication between the bank and the Board. The Board may grant in whole or in part, or reject

entirely, applications for notes, and may also impose such interest charges upon the notes as it may deem advisable.

In addition to a gold reserve of 40 per cent., which includes a gold deposit of at least 5 per cent. in the United States Treasury, the original reserve act required the deposit with Federal Reserve agents as collateral security of an amount of commercial loans discounted for member banks equal in amount to the notes issued. The expansion of credit in the form of Federal Reserve notes was thus limited to the amount of the discounts granted member banks, but in September, 1916, the act was amended to include as acceptable collateral bills of exchange bought in the open markets. The actual amount of notes in circulation was not however limited to the amount of these investments held by the reserve banks. After securing notes by the deposit of the required collateral a reserve bank could at once regain possession of the collateral and relieve itself of all liability for the notes by the deposit with the reserve agent of an amount of gold equal to the amount of notes issued. Through this roundabout process, somewhat more than two hundred million dollars of notes were issued and put in circulation during the first two years of operation of the reserve banks, an amount of notes considerably in excess of the discounts of the banks. All but a very small amount of the notes was secured by gold held by the reserve agents specifi-

cally for their redemption. This gold, like that in the Issue Department of the Bank of England, was not a part of the banking reserve of the reserve banks, but it was possible to draw it into the banking reserve at any time when the banks should have an amount of commercial loans on hand equal to the outstanding notes. This could be accomplished by taking out additional notes and then presenting them immediately to the reserve agent for redemption. By this device the notes already in circulation which had been secured entirely by gold, would then be secured by the commercial paper used in connection with the issue of the notes which had been immediately redeemed. This complicated process was much simplified by the Act of June 21, 1917, authorizing the issue of Federal Reserve notes directly against the deposit of the gold, thereby reducing the collateral security requirement from 100% of the note issue to the difference between the outstanding issue and the amount of gold held as a reserve. As a result of these changes in the law, Federal Reserve notes became a liability of the banks similar for all practical purposes, with an exception to be noted presently, to their liability for deposits with the sole exception that a reserve of 40 per cent. must be maintained for the notes as contrasted with a reserve of 35 per cent. in the case of deposits. This modification in the law was wise and proper. Special restrictions on note-issues are superfluous when notes are issued by

central banks. For proper use of the right of issue the main reliance must and should be on wise and experienced management for the reserve banks, and above all on a conservative Federal Reserve Board. Restrictions which would make over-issue impossible would also deprive the right of issue of all usefulness as a means of extending credit. There is, moreover, the danger of the over-expansion of credit in the form of bank-notes in any country in which deposit credits have become the more important credit medium. A considerable increase in deposit credit may be expected in the course of time to involve some increase in the demand for currency, and if this demand can only be met by the issue of currency covered by a high percentage of gold or by gold itself, the consequent reduction of reserves imposes some restraint upon the further expansion of credit. But the impact upon reserves is far too indirect and irregular to permit legislative provisions regarding notes to prove an effective and adequate means of credit control.

As a means of acquiring and retaining cash resources, the issue of Federal Reserve notes has been of great importance to the reserve banks. Notes have been issued to take the place of gold and gold certificates previously in circulation, and have also served to enable the banks to retain gold that otherwise would have been needed to meet both seasonal and permanent requirements. The issue of these notes is responsible however for

the expansion of credit within the country only to the extent that the loans and investments of the reserve banks are greater than they would be if the banks could issue no notes whatever. But these loans and investments would almost certainly not have been very different in amount from what in fact they have been, because the credit policies of the banks have not been primarily determined by the magnitude of the reserve or its ratio to demand liabilities. The cash holdings of the reserve banks would indeed be considerably smaller had they been unable to issue notes, and consequently they would be less well fortified for future contingencies.

Under existing legislation, it is to be noted that there are circumstances in which the issue of Federal Reserve notes would involve the absorption of more than the forty per cent. of gold required as a minimum reserve. The balance of sixty per cent must be covered by rediscounts or purchased bills as collateral. But if the reserve banks do not hold a sufficient amount of these particular assets, the difference can only be met by the deposit of additional gold. Thus in July, 1929, holding in rediscounts and bills an amount that was only sixty-three per cent. of the notes in circulation, it is evident that any considerable further issue of notes unless accompanied by an increase in the investments eligible as collateral would involve locking up an equivalent amount of gold. At a time when the gold holdings of the

reserve banks are exceptionally large, this limitation has little or no practical importance. In the future, however, it may become desirable to introduce further economies in the monetary use of gold, one of which could readily be made by the inclusion of United States Government securities as eligible collateral for Federal Reserve notes, or more simply by the elimination of all requirements other than that of the forty per cent. gold reserve.

To perform adequately the special functions for which they were established, the reserve banks must be endowed with large powers of credit and currency expansion and contraction, and reliance for the wise use of these powers must be placed mainly upon the character and experience of the management of the banks. There is therefore far more promise in legislation designed to secure an effective organization than can be gained through statutory devices directed toward the limitation of resources or the particular mode of their employment. Concentration of effort upon such measures diverts attention from the more vital factors—those of good management and the development of credit policies appropriate to varying circumstances.

In addition to provisions which place restrictions upon the power of the reserve banks to extend credit, the Federal Reserve Act also imposes detailed limitations upon the manner of its employment. Primary lending operations, those

to which the discount rate applies, are confined to the rediscounting for member banks of commercial loans and loans secured by United States Government obligations. The maximum maturity of loans acceptable for rediscount is ninety days, with the exception that for loans that are made for agricultural purposes a maturity of nine months is permitted. Eligible paper may also be used as collateral for advances to the banks on their own promissory notes maturing within fifteen days, an arrangement often convenient for the borrowing bank but otherwise of no particular significance. Commercial loans are generally defined in the Federal Reserve Act as "notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used or are to be used for such purposes."

In confining rediscounts to commercial loans, the act is more stringent than those governing the operations of central banks in Europe. In practice, however, the bulk of the dealings of these institutions is in connection with commercial transactions. While the restriction may in some particular emergency hamper the reserve banks in giving assistance to some threatened institution, it was upon the whole amply justifiable. Under our banking system in the past the collateral loan, especially stock exchange loans, had enjoyed a position as a liquid banking asset which it was hoped might be transferred to commercial loans.

Since all banks, large and small, make loans of this character, the restriction strengthens confidence throughout the community that the resources of the reserve banks will be generally available in all sections of the country.

Some of the reasons that have been advanced for the restriction of rediscounts to commercial loans are based upon misconceptions of some of the characteristics of this class of loans and of the possibility of controlling the uses of bank credit after it has once been extended. It has been contended that commercial paper was from its very nature liquid, and further that credit could therefore safely be granted to an extent limited only by the amount of such paper. Both of these conditions are hopelessly fallacious. In an emergency no kind of loan is liquid to any considerable extent. Business cannot be suddenly deprived of the amount of credit to which it has become adjusted. It is, indeed, often said that loans based upon any commodity entering into general consumption can be quickly liquidated. This can be done as regards any particular loan; but supplies for the immediate and distant future must be in process of production, and these will require a new batch of loans. The view that credit may be safely granted to a close approach to the value of merchandise in process of distribution, to say nothing of that in process of manufacture, is equally fallacious. Credit affects price. Liberal discounts at times induce and support speculative

advances in commodity prices, stimulating hazardous commitments on the part of producers, wholesalers, and retailers, as well as by speculative holders pure and simple. In short, there is no mechanical or statistical test for the amount of credit that may be granted with advantage to the community, whether the loans be commercial or collateral. Over-expansion is possible by both operations.

Experience has indicated very clearly that neither the volume of bank credit nor its uses are to any significant extent influenced by the eligibility requirements of the Federal Reserve Act. Applications of member banks for accommodation, aside from special cases of particular banks of small size, have not been limited on account of any lack of paper available for discount. In fact, in the ordinary course of business member banks as a group regularly hold several billions of eligible assets in excess of those discounted. The uses to which credit is put no less certainly escape the provisions of the act. Banks do not borrow at reserve banks in order to acquire additional assets similar to those which they present for discount. They borrow because as a result of their operations of every description they find themselves below statutory reserve requirements. The employment of credit is only modified to the slight extent that the lending policies of the banks may be affected by the desire to possess an adequate supply of discountable material.

In so far as reserve bank credit enters into use

through rediscounting, the eligibility requirement is then a minor factor; the controlling influences are the discount rate, and even more important the attitude of member banks toward becoming indebted to the reserve banks. With few exceptions, member banks, having borrowed because below reserve requirements, endeavor to liquidate such obligations speedily. This inclination is doubtless strengthened when the discount rate is high relative to the yield on the loans and investments of member banks, but the chief influence of an advance in discount rates seems to be indirect, manifesting itself through some slackening of the demand for accommodation which is made by the general public upon the banks throughout the country. At all events, persistent rediscounting, merely because a bank can lend at higher rates than the reserve bank discount rate, would appear to be the exception rather than the rule.

The situation as thus outlined is in substance that of the banks of the larger cities and of the banks generally in those communities and sections of the country in which the local supply of banking funds is regularly in excess of local borrowing requirements. But in many localities, especially in the West and South, the funds which local banks have at their disposal are insufficient to enable them to meet all demands for short-time loans from solvent borrowers. As most of these banks are in agricultural communities, they are also subject to wide seasonal variations in the demand for

credit in connection with the making and marketing of crops. Rediscounting by these banks is necessarily for longer periods than is commonly the case with the banks of the cities, and such discounting gives rise to special problems, in particular the danger that the local bank will become over-extended and that in the event of failure the bulk of its best assets will be found lodged with a reserve bank, leaving little of value to meet the claims of the depositors. In handling business of this character the reserve banks properly give particular attention to the character of the management of the member bank and of its assets as a whole, and not merely to the quality of the paper offered for discount.

In extending accommodation to the small local bank, the reserve banks are performing a useful service that for generations in some measure had been rendered to country banks by their city banking correspondents. It is a service, however, that lies somewhat outside the field of the major functions of the reserve banks as central banks, functions which must in the main be exercised in the money markets of the larger cities. An analogous situation is found in the business of most, if not all, of the European central banks. The business which they handle at their branches is largely local, and is comparatively little influenced by changes in discount rates which are so potent a factor in the money centers. There is however an important difference to be noted.

Each of the great European central banks in addition to local business operates in a money market while many of the reserve banks have no money market within the territory which they serve. This is indeed the situation in the case of all of the reserve banks, minor qualification perhaps being made for Boston and San Francisco, with the sole exception of the Reserve Bank of New York. Here is to be found the explanation of the overshadowing importance of the New York bank in the reserve system. It is the one member of the group that operates where there is both an elastic demand for bank credit sensitive to changes in rates, and where also the supply of funds is drawn from other than local sources, sources both national and international. It is only through transactions in the New York market that the reserve banks can quickly bring about changes either in the supply or cost of credit, and it is largely the situation in that market that determines the demand for rediscounts experienced not only by the New York bank but by all the other eleven banks in the system. This is a matter that requires somewhat detailed examination.

In framing the reserve act it was recognized that if the reserve banks were to exert anything more than a passive rôle, they could not be confined in the employment of their resources to the extension of credit in response to applications of member banks for rediscounts. They were therefore authorized to engage in certain "open market

operations" under regulations formulated by the Federal Reserve Board. These operations are narrowly restricted and consist of the purchase and sale of United States Government obligations, of State and municipal notes maturing within six months, and of bills of exchange arising out of commercial transactions. Investments in municipal warrants or notes provide a means, everywhere locally available, of employing the funds of reserve banks, but dealings in this class of securities are not sufficiently active for use as an effective agency of credit policy, and have been confined within narrow limits.

In 1913, when the Federal Reserve Act was passed, practically the entire supply of United States Government bonds was being utilized as security for national bank notes. The World War provided an abundant supply of this class of securities of diverse maturities, both long and short term. The market for them is fairly broad and active, giving them a quality admirably fitted for use by the reserve banks through purchase or sale as a means of influencing the volume and cost of bank credit. All of the reserve banks hold considerable amounts of government securities, and the total is subject to constant variation. But when a reserve bank, say the Reserve Bank of Cleveland or of Dallas, buys or sells governments, the transaction will seldom be executed within its own district. Purchases or sales of any magnitude will almost certainly be made in New York, and as

a matter of convenience be handled through the Reserve Bank of New York.

And finally, a similar, though somewhat less extreme, degree of concentration in New York obtains in the case of the third class of open market operations in which the reserve banks are permitted to engage—dealings in bills of exchange. Here a wide field of activity would be open to each of the reserve banks in its own district, were it not for the almost entire absence of the time bill of exchange in domestic business transactions in the United States. Many years ago the promissory note supplanted the bill of exchange in this country. For some two generations, borrowers have been securing accommodation from the banks on their own notes, single name paper, or upon the endorsed notes of their customers, double name paper. The authors of the Federal Reserve Act were strongly of the opinion that the bill of exchange was far superior to the promissory note for every banking purpose, and accordingly the note was excluded from open market operations by the reserve banks. The development of two distinct types of bills of exchange was contemplated—the trade acceptance, a bill of exchange drawn by the seller of goods and accepted by the buyer, and the bank acceptance. No success has followed efforts to bring about a return to the use of the trade acceptance as a common instrument in commercial dealings. Neither bankers nor the business community were convinced that the change

would be advantageous. For the banker the fundamental question at issue was whether analysis of the entire financial position of the borrower or a series of particular transactions affords the better basis for the extension of credit. To producers and dealers the introduction of the trade acceptance seemed likely to weaken the practice of early payment which had been steadily encouraged for at least a half century by the offer of discounts for payment within ten days after receipt of invoice. It does not seem probable therefore that any considerable amount of trade acceptances will become available for open market operations by the reserve banks.

A far greater measure of success has attended the development of the bank acceptance. Prior to the passage of the Federal Reserve Act, national banks could not engage in this branch of banking. The act authorized the acceptance of bills maturing within six months arising from the foreign trade of this and other countries, and the amending act of September, 1916, extended the power to domestic bills accompanied by shipping documents or secured by warehouse receipts for readily marketable staples.

The bank acceptance is unlike the trade acceptance in many important respects. It has most of the advantages both of the bill of exchange and of the promissory note. The accepting bank bases its readiness to accept upon very much the same considerations that are taken into account in dis-

counting single name paper—the character and financial position of the borrower, as shown by financial statements and other information. It is, however, by no means certain that the bank acceptance will come to be commonly used in domestic business in this country. In Germany it is a method of borrowing favored both by the banks and the business community, but in England the use of the bank acceptance is confined almost entirely to foreign business. This difference in banking practice is apparently in large measure a consequence of differences in the available supply of funds at the disposal of the banks. In England where the supply of funds which the banks would willingly employ in domestic commercial loans has exceeded the demand, the banks have naturally preferred to make advances rather than to accept for their customers. A similar disinclination among bankers, coupled with the greater complexity of acceptance arrangements, as contrasted with the discount of notes, works against the general adoption of the bank acceptance in domestic business in the United States. The most promising field for its use would seem to be in connection with the marketing of important agricultural staples by organizations sufficiently large to be able to secure acceptance credits from the large city banks. But like the trade acceptance, the domestic bank acceptance seems to hold little promise of such growth as might make it an extensive field for the open market operations of

the several reserve banks in their own districts.

In the trade between countries the bill of exchange is more than a convenient instrument, possibly but not certainly superior to the promissory note: it is absolutely indispensable. On account of the constant fluctuations in foreign exchange rates, the exporter ordinarily desires to convert his claim against the purchaser of goods into cash as soon as the goods are ready for shipment. This is readily accomplished through the sale of a bill of exchange drawn by the seller on the buyer and accompanied by shipping documents so drawn as to give control of the goods until the bill is either accepted or paid in accordance with the tenor of the instrument. The security of the bill of exchange with documents attached is further enhanced if the bill is drawn for acceptance by a bank rather than by the purchaser of the goods.

The bulk of the acceptance business arising out of the foreign trade of the entire world was for many years financed in London. The World War gave American banks a favorable opportunity to enter this field, and the development of the business was furthered by the readiness of the reserve banks to buy acceptances at preferentially low rates of discount. Leading banks in cities throughout the country have become acceptors of bills, but the market for these bills is largely in New York, and as in the case of governments, changes in the amount of acceptances held by the reserve banks involve purchases or sales in that

market. For the maintenance and further growth of this business, it must be possible to dispose of American acceptances at rates as low and as stable as those prevailing in foreign markets for similar obligations. These conditions cannot be established by the reserve banks alone. In the absence of a widespread investment demand, based upon the general practice of holding acceptances by the commercial banks as a secondary reserve, dependence upon the reserve banks becomes so complete as to destroy the value of the acceptance market as a channel through which the credit situation may be influenced by moderate changes in rates. In such circumstances, there would be danger that the need of the acceptance market for support might hamper the reserve banks in the execution of desirable credit policies. But as a secondary reserve investment, acceptances are in competition with the stock exchange call loan, an avenue for the employment of funds that is unquestionably equally as safe and liquid. In the money markets of most other countries loans of this character are not available because stock exchange transactions are conducted under term settlement arrangements rather than with daily settlements, and consequently foreign brokers cannot finance themselves by means of demand loans.

The demand for credit in connection with stock exchange dealings in the United States is extremely variable, and at times expands rapidly in spite of

advances in rates. It remains then for the future to determine whether the American acceptance market can maintain itself in competition on the one hand with foreign markets in which the acceptance is the favorite liquid banking investment, and on the other with a domestic stock exchange demand for credit that from time to time compels high and fluctuating rates.

The history of the Federal Reserve system may be roughly divided into three periods, the first extending over the short period of two and a half years to April, 1917, when the country entered the World War: the second extending beyond the end of the War through the subsequent months of business expansion and reaction into 1921: and the third covering the years since the close of the second period. During the first of these periods very little reserve bank credit was employed, and little direct influence was exerted upon the banking situation. At the outset on account of the temporary inactivity of business following the crisis of 1914 and the reduction in the required reserves of member banks, supplies of credit were superabundant. After the early part of 1915, loans and investments of banks throughout the country increased by leaps and bounds, but an unprecedented inflow of gold from Europe provided the basis for the resulting expansion of credit.

After the United States became engaged in the World War, the situation was speedily trans-

formed, and the demand for accommodation at the reserve banks assumed large proportions. As with central banks in the other belligerent countries, the operations of the reserve banks were subordinated to the financial policies and requirements of the government. Specie payments were suspended, not for any lack of gold but for military reasons. The resources of the reserve banks were enlarged by the substitution of Federal Reserve notes for gold certificates previously in circulation, and by entrance into the system as members of a large number of state banks and trust companies, including most of the larger and more influential institutions. The Treasury Department practically compelled the reserve banks to establish rates of discount at no higher rate than the low coupon rate of the Liberty Bonds of 4¼ per cent. In effect, the reserve banks were under the necessity of rediscounting all of the notes secured by government bonds that might be offered by the banks that were buying the bonds or were making loans to customers who were purchasing them.

Unfortunately neither government policies nor control of the reserve banks ceased with the Armistice in November, 1918. Additional securities (the Victory Loan and successive issues of short-term certificates) yielding low returns were marketed, and in spite of urgent representations made by officials of the reserve system, the Treasury insisted upon the maintenance of low discount rates throughout 1919. In the course of

that year unhealthy expansion of business and further inflation of credit were clearly evident in all parts of the world. In the United States, as elsewhere, the central banks were powerless even to attempt to exert a restraining influence. The inevitable reaction came in May, 1920. There was a precipitate fall of commodity prices, speedily accompanied by an extreme decline in business activity as production and trade entered a period of severe depression. But there was no panic such as formerly had always marked far less extreme revulsions of trade in the United States. There was no enforced immediate general contraction of credit. In fact, the reserve banks largely increased the supply of credit during the first months of the reaction, thus permitting liquidation to take an orderly course. The experience of this period affords convincing evidence of the adequacy of the reserve system to prevent a crisis from degenerating into a panic. Whether the system can exert a sufficiently strong restraining influence during a period of business expansion to prevent in large measure the development of conditions that make crises unavoidable remains for the future to disclose. The opportunity was present in 1919 but the power to act was withheld from the reserve banks by higher authority.

With the gradual recovery of business from depression that began toward the close of 1921, the reserve banks entered upon the third period

into which the history of the operations of the system may be divided. From the serious problems confronting central banks elsewhere the reserve banks were conspicuously immune. Current savings provided an ample supply of investment funds; government revenue regularly exceeded expenditures, making possible a rapid reduction of the public debt; the credit structure was firmly based upon a foundation of gold more than adequate for every purpose; and finally, the international financial position of the country was exceptionally favorable, causing larger importations of gold than could be fully employed without danger of undesirable inflation. In these circumstances, the operations of the reserve banks were conducted under conditions of a novel character, unprecedented in the experience of central banks. With a reserve ratio above seventy per cent. of demand liabilities, credit policies could be shaped without regard to the possibility of depletion of the reserve. As the customary restraining influence of a foreign drain of gold was absent, the reserve banks were free, and indeed were forced, to concentrate attention upon the probable effect upon the business of the country of more or less credit extended at somewhat lower or higher rates. Such factors as the activity of trade, the course of commodity prices, movements of the general level of prices, and situation in the security markets could be given exceptional weight in the determination of policies. But exclusive

attention could not be given to purely domestic factors. It was desirable to facilitate the return of other countries to the gold standard by the maintenance of monetary ease in this country, in so far as that was consistent with the avoidance of unhealthy credit expansion. And account had to be taken also of the possibility that a restraining credit policy in the United States might defeat its own ends by inducing the importation of gold in such volume as to provide commercial banks with the basis for a large amount of additional credit entirely independent of supplies furnished by the reserve banks.

For a number of years after 1921, the reserve banks succeeded in meeting the conflicting requirements of this situation with conspicuous success. The aggregate amount of reserve bank credit in use was fairly stable in amount, not far from a billion dollars, and influence was chiefly exerted through changes in the proportion of rediscounts to other earning assets. Liberal purchases of acceptances and governments tended toward ease in the money market, in part by increasing the supply of credit but even more by providing funds with which member banks might reduce rediscounts. A reverse tendency appeared when governments were sold and the stock of acceptances allowed to decline—an immediate increase in rediscounts followed by rising rates in the market as borrowing banks endeavored to liquidate their indebtedness. In 1928, however, the

situation was profoundly affected by the presence of a new factor—a demand for credit for the particular purpose of financing dealings in securities that continued to increase rapidly in spite of decided advances in rates. Similarly intense demands for credit for the same purpose had developed in earlier periods, in 1906 for example, but with this fundamental difference that the United States was then a debtor country and the mere offer of high rates could not attract and retain in the market indefinitely large supplies of additional funds. For a creditor country this limiting factor is absent, and therefore the advent in the United States from time to time of an intense demand for credit that is impervious to moderate advances in rates introduces a highly disturbing factor in the functioning of the mechanism of credit throughout the world. In effect, it means that the United States is but intermittently a creditor country, contrasting sharply in this regard with the reasonably steady accommodation extended to foreign borrowers by London in the pre-war period. Whether it is possible through the reserve system to control or offset the disturbing influence of recurrent intense demands for credit in American security markets remains for experience in working out the policies of the system to determine.

A universal collection system is a most effective, perhaps the most effective, single means of strengthening the banking system of the country

within the power of the reserve banks. Like a local Clearing House, it greatly economizes the use of money in banking operations. At the same time it will do much to prevent the breakdown of the check machinery of the country, one of the main causes of difficulty in former crises. All the checks drawn on a solvent bank, together with the drafts and other items payable through it, tend toward a close approximation with the checks on other banks and collection items which it receives from its depositors. When this system is fully developed, the slight daily differences in balances between banks will be settled on the books of the reserve banks, just as has long been the practice of the banks of Great Britain on the books of the Bank of England. Requirements for money which a bank in good credit will experience will come only in response to the everyday needs of its depositors, a cause of slight variation, and for export purposes. Balances in the reserve banks will become vastly more serviceable. In periods of strain, banks borrowing from the reserve banks will, as in England, want deposits rather than notes or gold. These are the advantages to be gained from a universal collection system. If they were more commonly understood, general acceptance of the new arrangement would soon be secured.

For many years before the passage of the Federal Reserve Act, both state banks and trust companies had been increasing rapidly in numbers and in volume of business. In many parts of the country

these state institutions were evidently more profitable and were rendering a more diffused and efficient service than the national banks. In 1900, the minimum capital required for the organization of national banks in places with a population of three thousand or less was reduced from $50,000 to $25,000 in order to bring the system within the reach of the more sparsely settled parts of the country. This change in the law was followed by a very considerable increase in the number of national banks, but the relatively more rapid growth of state banking institutions still continued. The advantages of membership in the Federal Reserve system were not sufficiently evident to warrant the expectation that state banks and trust companies would be induced to convert into national banks by limiting membership to institutions organized under the national law. On the other hand, membership of the state banks and trust companies was desirable, on account of the increased strength which the reserve system would then secure in resources and efficiency in operation. The reserve act, therefore, contained provisions for the admission of banking institutions organized under state laws on terms which, especially after the changes of the amending act of June 21, 1917, are distinctly more favorable than those to which the national banks are subject. In particular, provision is made for withdrawal from the system on six months' notice, and for exemption from the restriction on loans to any one

borrower to ten per cent. of the capital and surplus of the lending bank. In these circumstances, it was clearly imperative to liberalize existing legislation if banking under national laws was to continue the predominant factor in the banking business of the country.

Nearly half of the national banks had established savings departments before 1913 and held more than eight hundred millions of savings deposits. It was a recent development, and one for which there was no specific authority in the national banking law; but under the liberal interpretation of that law by the Comptroller of the Currency in recent years, it had been permitted because it was not forbidden. It was doubtful, however, whether the banks could enforce the thirty and sixty days' notice of the withdrawal of deposits which, following the practice of regular savings banks, appeared on the pass-books issued to depositors. This uncertainty was removed by the reserve act, which includes in its definition of time deposits, savings accounts subject to at least thirty days, notice. It is of course a great advantage to the national banks that in the employment of these deposits they are subject to much less restriction than is imposed upon savings banks in many of the States.

Inability to lend on mortgage security was the most serious disadvantage experienced by country national banks in competition with state institutions. Land has been by far the best local security

available over large parts of the country. Rural bankers have, in fact, taken it into account in making loans and by various devices succeeded in making it the security for many of the loans which they have granted. Under the Federal Reserve Act all banks, except those in central reserve cities, may lend for periods not exceeding five years twenty-five per cent. of their capital and surplus, or fifty of their time deposits, to fifty per cent. of its market value, on the security of unencumbered and improved real estate which is situated within their own district or within a radius of one hundred miles.

Subject to the permission of the Federal Reserve Board, and when not in contravention of state laws, national banks were also authorized to act as trustees, executors, administrators, and registrars of stocks and bonds. Many banks find this a useful extension of their powers. If trust companies may properly engage in banking, there can be no good reason why banks should not undertake trust functions. The department store principle in banking has made rapid headway in most countries in recent years. Under proper supervision every kind of safe financial business can be handled by a single institution effectively and to the advantage and convenience of the business community.

A variety of functions of a supervisory or administrative nature are exercised by the Federal Reserve Board. It is empowered to formulate

detailed regulations regarding various matters concerning which only general provisions are contained in the act, among which may be mentioned: rules for conducting branch offices; the regulation of state banks which become member banks; rules defining precisely commercial loans eligible for rediscount; and the regulations for the operation of foreign branches of national banks and of banks engaged in foreign banking in which national banks are permitted to invest not more than ten per cent. of their capital and surplus. The Board exercises many supervisory functions over the reserve banks which are similar to those which have long been exercised by the Comptroller of the Currency over the national banks. Examination of the reserve banks is under its direction. The Board must publish once each week a statement showing the condition of each reserve bank and a consolidated statement for all these institutions. It is also given a number of important powers to be exercised at its discretion. It may suspend reserve requirements for a period of thirty days, and renew such suspension for successive fifteen-day periods. For violations of law, it may suspend the operation of a reserve bank, and administer or liquidate it. The Board may also reclassify cities as reserve or central reserve cities, or terminate their designation as such.

The Federal Reserve banking system is based on principles which necessarily involve placing somewhere enormous power to expand credit. This

power cannot be surrounded by sufficient safeguards to prevent all possibility of its misuse, because in so doing, its wise use would be quite as seriously interfered with. Competent management is therefore absolutely essential if satisfactory results are to be secured. In the operation of the system, the boards of directors of the reserve banks and the Federal Reserve Board exercise distinct but vitally important functions. The boards of directors possess all the ordinary powers of such boards, except in so far as they are subject to control by the Board. All the loans of the reserve banks are made by the boards of those banks. In this matter, the Board has no power whatever, except that it may require, on the affirmative vote of five members, one reserve bank to rediscount paper for others, a power which is designed obviously to prevent any working at cross purposes among the reserve banks. Few or no occasions for its use will present themselves if all the reserve banks are well managed by their own boards. All rates of discount are fixed in the first instance by the directors, subject to review and determination by the Federal Board. Here again the decision of the reserve bank boards is altogether unlikely to be overruled if these banks are skillfully managed.

The power of the Federal Reserve Board to restrain the reserve banks is vastly greater than its power to force them to take positive action which might lead to the inflation of credit. This was

clearly the purpose in view in giving the Board the more important of its many powers. It may, for example, reject applications of reserve banks for notes, but this will not endanger assets; it will simply lessen power to expand operations. Its power over the discount rates of reserve banks will obviously be more effective when used to advance rates which it deems too low than it will be if used to enforce a rate lower than the management approves. The directors of the reserve bank would still determine the amount of accommodation which it might safely grant to member banks at the enforced low rate. Officers and directors of reserve banks may be removed at any time by the Federal Board, which is merely required to communicate its reasons for removal in writing; but the right of member banks to choose successors will still remain. It is evident that, in the absence of harmonious coöperation, the system would not work smoothly, even if it could be made to work at all. Under a wise and conservative policy, the system is certain to work well. If the reserve banks alone were conservative, the system might work well but with much friction. If the Federal Board alone were conservative, it might force good results from the system. On the other hand, if some of the reserve banks and the Federal Board were reckless, the system would probably break down; and if all the reserve banks and the Federal Board adopted a reckless policy, the results would be disastrous.

The difficulties which are being encountered in fitting the reserve banks into our banking structure and in making their operations a vital part of the banking business of the country are great. The full development of the reserve system will require a much longer period than was generally anticipated when the Federal Reserve Act was passed. Much real progress has unquestionably been made. The system has had the benefit of capable management, and no fundamental defects in its organic law have become manifest. Through the universal collection system the banking mechanism of the country will be greatly strengthened and improved. Although the lending operations of the reserve banks in ordinary times may not prove to be as significant as was generally anticipated, they will be serviceable to many of the smaller banks. In periods of excessive business and credit expansion, by example at least, the reserve banks will be able to exert a restraining influence, while in emergencies they will not only afford relief through the ample resources at their disposal but also take the lead in securing united and efficient action by all the banks of the country. In sum, the future growth of the Federal Reserve banking system in influence and usefulness would seem to be certain.

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